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ABSTRACT

The following papers are included: "The Visionary Entrepreneur" (Sidney J. Parnes); "Creative Discipline: Entrepreneurial Objective or Oxymoron" (Arthur Lipper III); "Wowing Your Customers" (Stew Leonard); "Results of Recent Studies Examining the Effect of Need for Achievement and Other Variables upon Entrepreneurship" (David C. McClelland); "The Entrepreneurial Mind" (Ayn Decker); "Shepherding Innovation and Entrepreneurship throughout the Business" (Mary Walsh Mossop, Jack Mossop); "New Business in America: A Report on Research" (William C. Dunkelberg, Arnold C. Cooper, William J. Dennis); "Value Profiles of Female Entrepreneurs" (Lloyd W. Fernald, George T. Solomon); "Business Intelligence Techniques for the Entrepreneurial Firm" (Benny Gilad); "A Look at the Rationality of the Decision to Export by High Technology Exporters and Non-Exporters" (K. Mark Weaver); "Climate to Promote Entrepreneurship or Intrapreneurship" (Erik K. Winslow); "An Expert Support System for Compensation Decisions" (Ernest H. Forman); "The Effects of Trucking Deregulation on the U.S. Economy, 1980-1985" (Thomas A. Gray); "Workshop on Ownership of Ideas and Information" (Peter Marx); "'Contracting Out'--Stimulant to Small Business Employment Growth?" (William C. Dunkelberg, William J. Dennis); "Some Thoughts on Gaining Creative Contributions in Organizations" (Bruce C. Whiting); "The Risks and Rewards" (M. Catherine Ashmore); "Can Franchising Survive?" (Lee William Sutherland); "Special Legislation Commission on Small Business Incubators: The Commonwealth of Massachusetts" (Frances F. Alexander); "Making Financial Projections for a Business Plan" (Richard P. Ruskan, Diana Ororbia); "Financial Management/Tax Planning for the Entrepreneur" (Bernard W. Meyler); "Innovative Firms Need Innovative Financing" (Bruce D. Phillips); and "The Minimization of Transaction Exposure by a Sample International Business" (Carl R. Crego). (MN)

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KEYS

to the future of AMERICAN BUSINESS

May 29-30, 1986

Framingham, MA

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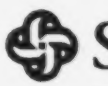

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PROCEEDINGS

THIRD CREATIVITY, INNOVATION AND ENTREPRENEURSHIP SYMPOSIUM

FRAMINGHAM, MA
MAY 29-30, 1986

KEYS TO THE FUTURE OF AMERICAN BUSINESS

EDITED BY

GEORGE T. SOLOMON
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&

BRUCE G. WHITING
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PENNSYLVANIA

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FOREWORD

The Third Creativity, Innovation and Entrepreneurship Symposium, Keys to the Future of American Business, was held on May 29-30, 1986, in Framingham, MA. The symposium offered an opportunity to hear from leading experts in the academic, public and private sectors who are involved in creating environments which encourage entrepreneurship.

These Proceedings present the substance of the symposium. I wish to acknowledge the many contributors for their excellent papers.

Special thanks to the staff of the National Center for Research in Vocational Education, Ohio State University, for printing the proceedings; Northeastern and Suffolk Universities for hosting the symposium; and to Venture Magazine for promoting it.

Finally, our appreciation to other organizations for their support: National Federation of Independent Business, Smaller Business Association of New England, Inc., Arthur Young, AT&T General Business Systems, Goulston & Storrs, George Washington University's Department of Management Science and Creative Education Foundation.

The entrepreneur built and sustains our great country. Understanding the factors which stimulate entrepreneurship is important for those of us who support and encourage that activity. Generating such understanding was the purpose of the symposium. I hope these proceedings contribute to that goal as well.

Louis R. Faoro
Associate Administrator
for Business Development

October 1986

SPEAKER PRESENTATIONS

THE VISIONARY ENTREPENEUR
SIDNEY J. PARNES
CREATIVE EDUCATION FOUNDATION

Arthur Lipper has discussed the entrepeneur and creativity in general terms. Let me now highlight the differences between a conventional entrepeneur, a creative-adaptive entrepeneur and a creative-innovative entrepeneur, whom I call a visionary one. I will differentiate by means of a homey, personal example.

During the great depression of the 30's, at about 12 years of age, I was seeking part-time work that was extremely difficult to find. So, with an entrepeneur uncle's help, I started my own business.

My uncle gave me a $1.50 line of credit to purchase from his electrical distributorship 30 "Coilettes." These were wire coil-springs that you wove onto a telephone receiver cord or ironing cord so that it coiled the wire cord up like a "Slinky"--loops of wire that sprung back into a realatively tight coil after the cord was extended. Thus you had no sloppy wires getting into the way on your desk or your ironing board when the phone or iron was back "at rest." The present-day small-circumference loops built right into many receiver cords are undoubtedly the current improvement over the older "coilette." At the time, the "Coilette" was an inexpensive invention that met a real need. My uncle saw it as a 10¢ "5 and 10" item that I might do well with in a "house to house" sales business. I could gross 7 cents on each sale, and by knocking on enough doors, I was able to earn 50 cents or so each day. I say "earn", because gross and net were practically the same for me then. I walked to neighborhoods nearby, so I had no travel expense other than shoe leather, which we fixed those days by lining the worn out shoes with butter boxes as "inner soles." And of course I packed the lunch I would have eaten at home anyway.

I was delighted with my new business, and worked harder and faster to knock on more and more doors, learning that there seemed to be a probability of number of sales being closely related to the number of doors knocked per day. I submit I was a conventional entrepeneur. I showed many of the traits of an entrepeneur, who does not necessarily have to be creative to be successful at what he or she attempts. I could have continued, as do some businesses, in the very same "successful" vein, and earned consistently the spending money I had been seeking.

Soon, however, my business became what I now call a creative-adaptive enterprise. It may have been my uncle or father whose counsel made the changes, I don't remember, so I won't take credit for it alone. What happened was that I came to realize that people sometimes ruined the "Coilette" while trying to install it--it was a bit tricky until you had done a few. How many times have you bought something unassembled and cursed the directions that came with the product? So I decided to add service to my line--as a matter of fact, I decided I could probably sell almost as many at 25 cents each installed, and I was right. It took just as many "knocks" to get a door opened, and just as many doors opened to get one person to talk with you. And if the 25 cents was more than they would spend, I could always sell it to them not installed at the 10 cent price. As a result, my profits doubled, and I was ecstatic about earning over a $1.00 a day!

Then I began to critically analyze my business rather than go along forever satisfied with my "success." I observed carefully as I installed "Coilettes." I noticed frayed ironing cords, loose or broken plugs, etc. I began asking customers if they'd like me to tighten, repair, replace, etc., and soon was carrying a small tool kit with me, and a few ironing cords, plugs, etc. To make a long story short, I again doubled my profits for the day's work--and made a lot of happy people to boot! My business was now about 90% service. And I was bringing home around $2.00 a day at a time when our family was living on a draw from our family business of not much more than double that.

But I didn't know about "creativity" way back then. I just considered myself an intelligent, diligent entrepeneur. I submit now that I was exhibiting "creative-adaptive" entrepeneurship.

I never reached what I now call "creative-innovative" entrepeneurship. I never understood the "visionary" concept. If I had, my task might have gone something like this:

> "Let me dream. Let me fantasize: People are flocking to me to buy my "Coilettes" and services. I no longer have to knock door after door. I see all these enthusiastic, happy faces crowding to me to get what I have to offer."

George Romney of American Motors once emphasized that you get good design ideas by thinking very futuristically--very far out--and then engineering the dreams down to reality--not by taking a present design and "dressing it up."

If I had dreamed--envisioned--fantasized--big dreams instead of merely accepting the fact that I had to knock scores of doors to achieve a sale, and if I had then worked creatively to bring the dream to some semblance of reality, I may have become for the electrical-goods world the modern-day Tupperware, Mary Kay or Agway! I get excited now thinking of what I might have done with networks of satisfied customers, building afternoon "service-center" parties in their homes, or the like. Remember, almost all women were at home then rather than at jobs outside the home.

And if I were reliving that life but understanding what I do now about creativity, I'd have all my "customer reps" meeting in "quality circles" to derive newer and better ideas for making a better, more satisfying, more socially-valuable, more profitable business for all of us. I would apply my "creative leadership" to facilitate the creative functioning of everyone in the organization, so that our business' creativity would be a result of everyone's creative effort, everyone's satisfaction--not a business where the top person's creativity is all that's allowed and the rest merely implement the leader's ideas.

The Japanese industrialists are a less homey, more important and current example of how businesspeople worked up through the three levels of entrepeneurship I have been discussing. First they copied our businesses diligently and successfully as "conventional entrepeneurs." Then they began creatively adapting our

products very systematically and successfully as creative-adaptive entrepeneurs. Finally they began to become visionaries--creative-innovative entrepeneurs who have caught the attention of the world.

It is worth noting with regard to the Japanese example, a national industrial survey conducted by Soken Research Institute in Japan in 1983. It showed that 68.8% of companies responding indicated creativity as a characteristic considered especially important for their employees--the highest percentage in any quality listed. Ninety percent of respondents provided some kind of creativity-development training in their companies.

As an immediate example of visionary entrepeneurship, let me remind you of the most current "Hands Across America" project. Create the image of millions of people with hands linked across the entire continent. What a vision--what a dream! Then imagine the massive creative implementation to bring that big dream into even <u>partial</u> reality. This also exemplifies what almost always happens in visionary entrepeneurship: the <u>full</u> vision is rarely achieved. But even the partial achievement is impressive and productive. And the big dream had to occur first. What a stimulus the original vision--the big dream--provided! As I stood under the Arch in downtown St. Louis I joined exhuberant people stretching and squeezing to make their portion of the link complete. Whatever you may personally think of the Hands Across America idea, it is an excellent example of dreaming the big dream, sometimes in a flash, and then working creatively and tirelessly to bring as much of it as possible to fruition.

Let's now explore a wee taste of this process of deliberately dreaming, then bringing the dream into some partial reality. We don't just wait for the dreams or visions to occur. We <u>deliberately</u> form dreams and fantasies in our minds.

"Family Circus" cartoon shows the child lying in bed saying to his mommy, "I was just dreaming--y'know, when you close your eyes and the picture comes on?" We all dream "night dreams", and probably most of us "daydream" as well. So we are accustomed to the imagery process. Let's warm up to its <u>deliberate use</u> with a quick experience:

> Take a few deep breaths, relax, close your eyes if comfortable doing so, and image your favorite food or beverage. See it, smell it, feel it, hear it, taste it. Go ahead now and <u>enjoy</u> it.
>
> Now with all your cravings satisfied, slowly open your eyes and leave those images behind.

How many found they could imagine seeing, smelling, feeling, hearing or tasting that favorite of yours? Everyone seems to have been able to experience that.

Now for a five-minute personal example of <u>using</u> that imaging ability in a wee sample of the visionary process we have been discussing.

Create several dreams, visions, images in your mind of some things you wish you could accomplish in the next week in your job, business, or even personal life--NEXT WEEK, not next month, year or lifetime--keep it simple--but things you don't expect to happen under present circumstances or patterns of behavior. Think, "Wouldn't it be neat if....." List several.

Now select one of them to focus on.

Try next what I ask you to do. I don't expect this very brief attempt will work successfully for all of you, but for some it probably will. And the rest will at least have a better notion of what I mean by visioning as a deliberate creative process.

Relax, close your eyes if comfortable, image yourself achieving your wish--your vision--making it happen--if necessary by magic. Fantasize it occuring--see it, feel it, hear it, etc.--anyway you can--no constraints.

Now begin modifying your fantasy. Change the image bit by bit until you bring it down to some manageable aspect. Rearrange elements, magnify some things, minify others, until you have an image you can conceive of yourself carrying out--even if it is only a small part of your overall vision, dream or wish--perhaps only an opening wedge. If you don't see how you can do it because you don't have something you need, fantasize having exactly what you need, then create a substitute from anything you have or can get.

How did you do? How many gained some new insight, new approach, new attitude, new stance--something you may be able to use?

It appears there are some at each table who experienced something worthwhile. That's fine. Perhaps you can share something about the process you experienced that may be helpful to others at your table when we break in a few minutes.

Regarding this systematic visionary process you "tasted", our Future Creative Problem-Solving Workshop at Epcot provides intense direction under skilled leadership in very small groups and in an exemplary climate for creative accomplishment. There we devote five days rather than five minutes towards stretching in creative ways toward actualizing our greatest dreams for our organizations. All of our Creative Problem-Solving programs promote the visionary entrepeneurship approaches, but the Epcot program deals with it totally.

Let me now summarize with a few cartoons that tell my story visually.

The conventional entrepeneur plods ahead in known, proven ways, relying totally on past experience to direct and program him or her. He or she attains few new insights while plodding and re-plodding the same old paths. (Burr Shafer's cartoon--from Through History with J.Wesley Smith, Vanguard Press, 1950--shows a man in the wilderness rubbing two sticks together as one would do to start a fire, and saying to a friend, "I was just rubbing these two sticks together and they started to get hot. If I hadn't stopped, they might have caught fire.")

The creative-adaptive entrepeneur uses creative problem-solving is sensitive to problems and challenges, and creatively solves them by transforming, adapting, etc. But this entrepeneur may miss far-reaching implications. (Burr Shafer's cartoon--from Through History with J. Wesley Smith, Vanguard Press, 1950--shows a cave-man who has put a wooden axle through a small, round stone shaped like a wheel. He has attached a handle to the axle so one can roll it back and forth. The caption reads, "See, it ROLLS! I told you I'd figure out something to amuse the children.")

The creative-innovative entrepeneur--the visionary--deliberately and systematically dreams, envisions, and then uses creative problem-solving to turn these images into the best reality he or she can possibly achieve for the moment. The conventional entrepeneur-associate looks on without understanding or often with disbelief. (Burr Shafer's cartoon, which appeared in a 1971 New Yorker Magazine, shows two prehistoric men, one of whom is fashioning a large wheel from a stone he is chipping away at. His friend is puzzled. "It looks O.K.",he mutters, "But how are you going to hit people with it?")

The visionary dreamt in pre-historic times of "walking on water" and ended up building a log bridge over a stream. The conventional entrepeneur looked on, as in one of Burr Shafer's cartoons, and exclaimed, "Who ever heard of crossing a stream without getting your feet wet?"

The visionary entrepeneur sees what might be, the conventional counterpart sees only what is. (Gordon Watts, 1977 cartoon in Saturday Review shows two cave-men drawing on a wall. One has etched an elk, the second a jet airliner. The second one exclaims, "Why does it have to look like an elk or something? I just use my imagination!")

SIDNEY J. PARNES

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CREATIVE DISCIPLINE
ENTREPRENEURIAL OBJECTIVE OR OXYMORON?

by
Arthur Lipper III
Chairman, Venture Magazine

Most studies of successful entrepreneurs find in their samples the presence of extraordinarily high levels of motivation and sharpness of focus. The successful entrepreneur is usually characterized as a person having a clear, though not necessarily rigid, view of that which he or she is not attempting to, but rather intending to, accomplish. The successful entrepreneur is seemingly without any self-doubt as to his or her ability to achieve the intended objectives. Of course, one of the factors which makes the studying or entrepreneurs so difficult is the fact that one can only identify successful entrepreneurs as a group, and therefore can obtain only their retrospective impressions or statements of how they felt before they became successful. Do they forget the sleepless nights and other indications of anxiety or did they truly never doubt their ability to succeed?

Is extreme focus a form of discipline? Is the denial of distraction what successful entrepreneuring is all about? As a provider of capital, I am attracted by those entrepreneurs having the stated or perceived strength of focus. When considering the risk of placing other people's capital (or my own) at the disposal of another person, the appearances of a disciplined mind, and indications of the person seeking funding being self-disciplined, are positive factors. Why should this be the case? Generally one does not equate or associate the presence of discipline with the presence of integrity. Nor do we generally expect to find any correlation between discipline and ability or intelligence. Why then should I, and I believe many others in a similar position, feel more comfortable within a disciplined person having control over my assets than a non-disciplined one?

Degree of predictability must be the answer. As an investor or lender, I must feel that in dealing with the disciplined person there will be less of a chance of my being surprised and, as many of use have learned, in the business of investing in entrepreneurs and newer companies, most surprises are unwelcome and unpleasant.

But is not creativity the key ingredient in entrepreneurial success? Hasn't the creative successful entrepreneur generally found a better way to provide a service or make a product? Isn't creative problem solving or constructive solution finding the essence of successful entrepreneuring? Of course it is, at least in part.

But then one is faced with the question "are conventionally disciplined people usually creative?" Doesn't the process of creativity require divergent thinking? Isn't divergent thinking something which is inherently questioning, if not a bit contemptuous, of authority and established concepts and protocols? Does someone who is "serious", in the European use of that term, and therefore disciplined consider ideas which, on their face, appear to be silly and contra-conventional?

This is the dilemma of the entrepreneur and those of us involved in the process of observing and assisting him. We'd all like to find or create such super "Patton/Picaso"-like hybrids who are highly motivated, intelligent and divergent thinking-but-disciplined, entrepreneurs. Perhaps with the assistance of forums such as this one we can help create the educational support which will lead to the development of the new and improved entrepreneur --- one who will be able to predict accurately cash flow requirements and walk on water.

I do not wish to give you the impression that such a beast does not exist. Actually, I believe such a combination of seemingly contradictory characteristics is present in many successful entrepreneurs. It is exactly this rare combination of focused energy applied to a solution which has been determined after a process of considering a range of alternatives that is the foundation for entrepreneurial, success.

As is increasingly recognized, VENTURE Magazine attempts to be just such a combination of forces. We assist the entrepreneurial business owner and investor by presenting business and technological news in a disciplined and consistent format using creativity in the orientation of the editorial focus.

VENTURE Magazine is dedicated to the proposition that when a business owner profits, many others profit as well. Those who share this vision can help by joining VENTURE's mission of providing "profit education". The aspect of profit education we are focusing on today is that of creativity. More particularly, I would ask consideration of the specific means by which we can help those having entrepreneurial tendencies to more effective;y apply proven successful creative problem solving methodology to the opportunities on which they are focused. What are the techniques of creating a mess from which may be discerned solutions? How does one find answers that have eluded others who have contemplated the same problems or opportunities?

In this group, I am usually associated with VENTURE Magazine, which commenced publishing in 1979 and which has a paid circulation of more than 330,000. I own and actively manage VENTURE, but did not found or originally finance the magazine. There is, however, another publication which I did conceive, finance and create which, although I do not actively manage, somehow is still able to make a meaningful monthly contribution to more than 50,000 parents of gifted children (gifted of course, if for no other reason than by virtue of their parents being subscribers to GIFTED CHILDREN MONTHLY). Both of these publications are intended to assist those who have many similar characteristics, the most important, to me, of which is the future societal contribution of which they are capable. "We Need Them Later. They Need Us Now." is the phrase which is on the stationary of our Gifted Children Advocacy Association, the enlightened self-interest entity affiliated with The Lipper Foundation and GIFTED CHILDREN MONTHLY. That statement could just as easily apply to the young entrepreneurs many of us also seek to assist.

In our GIFTED CHILDREN MONTHLY the editors invest a fair amount of editorial focus on creativity. In the December 1985 issue we published a special report entitled "Straighten Out That Mess With Creativity". The report was authored by Dr. Donald J. Treffinger, Director of the Center for Creative Learning. Much of the material for the article was derived from Dr. Treffinger and S.G. Isaksen's book Creative Problem Solving: The Basic Course. Believing that Don's short article includes so much of the process, I offer it to you herewith.

"STRAIGHTEN OUT THAT MESS WITH CREATIVITY"

Creativity is an elusive trait --- you know it when you see it, but it's not as easy to define. And yet, we all have the capacity to be creative, and much more so than we sometimes think possible. Then why aren't we? Because there are several common misunderstandings about creativity that get in the way; they start in school and extend into adulthood.

Some Common Myths

o Creativity Can Be Reduced to Workbook Activities

Not true! While there is a place for such activities to help students learn and use the methods and techniques of creative thinking, it mustn't stop with a few workbook pages. Creativity requires a student to apply his or her long-term energy and motivation to generating ideas and solving problems.

o Creativity Is All Arts and Crafts

Not so. Of course creativity is involved in such things as artistic or musical production, but it is manifest ink all other disciplines, too. Creativity can be expressed in developing ideas and solutions to problems in any area of human endeavor.

o Creativity Is A Rare Form of Genius

This belief puts creativity out of reach for most of us, which is unfortunate and tragic. We all can learn to use our imagination better, to be more creative. Keep in mind Abraham Maslow's reminder: "Creativity might as much be found ink a first rate chicken soup as in a third rate painting."

o Creativity Is Not "Real" Work

Really? Some educators think of creative thinking as "all frills", comic relief from the usual diet of convergent thinking (focusing on a single correct answer). What such teachers fail to see is that creative thinking in combination with recall and critical thinking can significantly enhance students' learning.

Creativity Re-Defined

What is this animal that can't be reduced to workbook dittos, is often more than arts and crafts but usually less than a rate form of genius, and involves serious labor on the part of students?

Creativity should be thought of as the process of making and communicating meaningful new connections --- to help us think of many new and unusual possibilities, to enright our experience by adopting different points of view, and to guide us in generating and selecting alternatives.

A far cry from mere "fun and games", CPS (creative problem solving) is important to gifted students and adults alike. It is important because it can open opportunities for us, help us tackle challenges more effectively, and help us realize our wishes, hopes, dreams, and aspirations.

CPS: Six Major Stages

There are six stages you'll traverse when applying your creativity to solving problems. A brief description of each follows:

1. Mess Finding

   Just what's the mess that needs cleaning up, the situation that demands our attention? We have to identify and acknowledge this first before we can proceed.

2. Data Finding

   Once the general mess is defined, the next stage involves "taking stock" --- unearthing and collecting information, knowledge, facts, feelings, opinions and thoughts to sort out and clarify your mess more specifically. What do you know about the situation and what do you still need to know?

3. Problem Finding

   Now that your data is collected, you need to formulate a "problem statement" that expresses the "heart" of the situation. You must try to put aside the common assumption that you "already know what the problem is" and try to state the problem in such a manner as to invite novel perspectives on it.

4. Idea Finding

   This is the stage in which you brainstorm as many ideas or alternatives as possible for dealing with your problem statement. Don't evaluate your ideas at this point, merely list them as an idea pool from which you'll draw in putting together a variety of solutions to your problem.

5. Acceptance Finding

Having decided upon a solution, it's time to formulate Plan of Action to implement your solution. Determine what kind of help you'll need, what obstacles or difficulties might get in the way, and what specific short- and long-term steps you are going to take to rid yourself of that original mess!

Whether the problem is getting your youngster to help within the household chores or assisting him or her in making a career choice, the six stages of Creative Problem Solving can be applied successfully. Try it. You'll be surprised at the satisfaction gained from creatively working through a mess from start to finish.

We have with us today a man to whom I am indebted, which as a number of my creditors would have you know, does not make him unique. He is, however, unique amongst my creditors, as I have owned him a debt longer than any of the others, and they provided mere goods or services.

That which Sid Parnes provided, through creating the Creative Problem Solving Institute, which my wife and I attended one summer, was an enhanced perspective. By enhanced perspective I mean a new and different way of thinking and viewing opportunity. Sid has developed a process for helping those apply their experience and intelligence in a manner which yields surprisingly positive and constructive results. Sidney, I take this opportunity to say thank you.

Now if we could only go a single step further than helping entrepreneurs become creative in a more disciplined manner we would really enrich America. What could that step be? Requiring that non-equity-focused or usurious lenders burdened or challenged by dealing with entrepreneurs attend creativity sessions? Can you imagine the resulting financial transactions? Oh well, that won't happen as the ultimate oxymoron is probably "creative commercial lender."

Thank you for considering the need to blend creativity and discipline to the end of developing more successful business building owners.

Wowing Your Customers

Stew Leonard
President, Stew Leonard

It's an honor to be speaking at an SBA conference. I'm very grateful for the opportunity because if it wasn't for the SBA, I wouldn't be in business today!

Being here certainly is a far cry from the time our local junior high school invited me to speak to two classes during their "Career Day." My topic was "Business As An Avocation."

I drove up to the school, and there was a big red fire truck with kids climbing all over it. I went inside and in one crowded classroom were policemen in uniforms explaining guns. In another classroom the Air Force was showing a movie with jets screaming across the sky. I walked into my classroom at the end of the hall and there were six kids. I later found out that five of them couldn't get in to any other rooms, and that the sixth was the son of our manager.

After I gave my little talk, I presented each of them with a free ice cream coupon that they could redeem when they visited our store. About 15 minutes later, while I was having a cup of coffee and waiting for my second class to start, Dr. Hytower, the Principal, came up to me and said, "Stew, we are moving you to the auditorium, we have over 200 kids that suddenly want to hear your talk."

Talk about word of mouth advertising! I said to myself, "Isn't it great the way the young people of today appreciate a good talk about business." So today, I'm not taking any chances. I have free ice cream cone coupons for everybody here and they will be passed out as you leave. On the back of the card, I've put a little map, and I would love you to come and visit our dairy store if you're ever in the area.

By now, you're probably wondering what a fellow with a single dairy store is doing speaking at the Symposium on Creativity, Innovation and Entrepreneurship. Well to tell you the truth, so am I! But the fact is, that today, creativity and innovation are an integral part of my success which affects even the fellow with a single dairy store.

But this morning, before we get into those specific issues that affect us all, I've been asked to give you a little look behind the scenes of our business and share with you, four simple secrets of success that have worked like magic for us in the hopes that you can pick up an idea or two for your own business.

I started as a milkman delivering milk to people's homes. I was struggling. My problem was that the big supermarkets were taking all of my customers. Home delivery of milk was fast becoming a dying business, much like the ice man after the advent of refrigeration.

One day, two engineers from the state of Connecticut Highway Department came to tell me that they were going to run a new super highway right through the center of my dairy property. They said that within a year, there would be bulldozers right where we are standing. A few months later, they were right. It was like a bomb had hit!

I didn't know what to do and quite by accident, I started to ask the customers on my milk route for advice. I asked them how I could best satisfy them and earn their business. The told me they were after only two things.

1. The freshest milk
2. The best price

I analyzed it for a while and I got an idea. If I could build a dairy store with my milk processing equipment in a glass room right in the center of the store, customers could come direct to me and they could actually see their milk being bottled. Why their milk would be so fresh, they'd have to own a cow to get fresher milk.

And they'd save money too because they'd be cutting out the middleman - me, the milkman. Unfortunately, by the time I finished paying off the mortgage on our property, about the only thing I had left was my idea. The local banks all turned me down for a loan. We can say what we want about banks and bankers - and most of us do... but the truth is, without their money to start, we're not going to get very far in business.

Luckily, I turned to the Small Business Administration and they believed in me. They put their money on the line by guaranteeing my loan from the Merchants Bank in Norwalk. So you see, if it weren't for the SBA, I wouldn't even be in business today and I'm very grateful.

When the building was 3/4 completed, I got some bad news. A fellow who owned one of the largest dairies in the state of Connecticut came to see what I was up to. I showed him the building, and he said to me at the end of the tour, "Stew, I feel sorry for you. You've got to be crazy. They'll be making a restaurant out of this within a year."

But that afternoon I got some even worse news. My accountant called me in and said, "Look at the pile of bills. We are already $100,000 over budget. I don't think you are going to make it." I felt like the guy who got a call from his doctor who said, "I have some bad news and some worse news. The bad news is that your tests came back and you've only got 24 hours to live." The guy says, "What could possibly be worse news?" The doctor replies, "Well, I've been trying to get a hold of you since yesterday."

I went home feeling pretty bad. I had everything in the world on the line. I remember I couldn't sleep and got up in the middle of the night and went downstairs to the kitchen. I warmed up the coffee that was left over from supper. It was dark outside and it was raining. And I was all by myself.

I sat there with a legal pad and I made two lists. One of all the reasons that people said I was crazy and the other of the reasons I felt I was going to succeed.

The negative list was quite a bit longer than the positive list. As I sat there and I didn't know what to do, I remember my wife Marianne, coming down in the morning. It still chokes me up a bit to talk about it. She said, "What are you doing?" I said, "I'm worrying! It looks like we aren't going to make it." And she said, "Why?" I told her that "everybody's telling me that I am crazy and we have run out of money." And she said, "Don't listen to those negative people.

And you are not going to go broke either and she went over to her kitchen desk drawer and took out a little savings passbook. She said, "This is the $3,000 dollars that I inherited and I have been saving it for the children's education. We can put it back after the dairy is a success."

I didn't have the heart to tell her that I really needed a <u>hundred thousand dollars</u>. But right then and there I decided to redouble my efforts. I just couldn't let her down.

I then discovered a couple of interesting things about leverage. My creditors would extend me a little more time. I found out that I could get a second mortgage on our home and I even found out that I could borrow on our life insurance.

You might say, I was in debt!

And the good news is that we opened our little dairy store. We had seven employees and sold the same seven products I had sold off my milk truck.

About a week later, I did the dumbest thing of my life.

I was standing at the front entrance with our manager. I was shaking hands and welcoming everyone, when suddenly, a customer came in and said, "This egg nog is sour." I took it and did the natural thing and smelled it. Then I did the next natural thing....I said, "You're wrong, it's not sour." I handed it to the manager and I said, "Is this sour?" He smelled it, tasted it, and said, "It's fine." Then to prove she was wrong, I said, we sold 200 yesterday and you're the only person who has complained."

By that time, the customer was furious, veins were popping out in her neck. She said, "I want my money back." It was .99 cents and I reached in my pocket and gave her a dollar bill. She was so mad, she just turned on her heels and started out the door and uttered the famous words that I'll never forget as long as I live. "I'm never coming back in this store again." And I said to myself,

> "What happened?" "What have I done?" <u>I was right, she was wrong...I even gave her her money back....but I lost the customer.</u>

I realized that I had just done something awfully dumb. I told a customer that she was wrong. It dawned on me that <u>I</u> was the one who was wrong.

So I sat down and wrote two rules that have since become the foundation of our business philosophy. In fact, we recently had the two rules chiseled into a 6,000 pound rock of granite and it stands at the front entrance of our store. It says: Our Policy,

Rule 1, The customer is always right
Rule 2, If the customer is ever wrong, reread rule 1

When a customer walks into our store, she doesn't say what can I do for Stew Leonard's today, she says, what can Stew Leonard's do for me today. And if he can't do anything, I'm not coming back... and I don't blame her.

The average customer spends $100 dollars a week in our store, that's $5,000 dollars a year or $50,000 dollars in 10 years. So we look at each customer as a $50,000 asset. Our customers know that within 10 miles of our store, there are over 93 other food stores selling basically the same products that we do.

So our goal is satisfy every single customer. We learn how by asking them. This is our suggestion box. We receive over 100 notes a day. Every morning at eight o'clock, the box is opened and the notes are typed up into a report. By eleven o'clock, a copy of the report is on every single manager's desk.

We even put 12 copies of this report on all the tables in the cafeteria so our people can read the feedback from the customer. It is like taking the pulse of our business just as a doctor takes our pulse to determine our health. The customer who complains is really our best friend because she cares enough to give us the opportunity to improve.

The customers we have to worry about are those who don't care enough and they just walk out and never complain. But most businesses don't like to hear complaints. They're like the head Lama in a monestary in Tibet. A new monk came to join the order and the head Lama said to the young monk, "You know, you are going to have to take the vow of silence. Every ten years you are only allowed to speak two words." At the end of ten years, the new young monk says, "Hard Bed," the second ten years go by and he says, "Cold Food" and after the third ten years, "I quit". The head Lama looks down and says, Just as well, for thirty years now you have been complaining."

So the first simple secret of success is to SATISFY THE CUSTOMER.

"TEAMWORK GETS IT DONE"

Walt Disney said it best... "You can dream, build and create the most wonderful place in the world, but it takes people to make that dream come true."

We appreciate our people. This is our Avenue of the Stars. We have plaques made of all of our stars of the month as we call them. Our hallways of our office and store are like trophy rooms. We are proud of the Dale Carnegie Graduates that we have at our store. We now have over 300 of them. We have award banquets at the drop of a hat. We are really into appreciating, applauding and respecting our people.

One of the greatest books this year in my opinion is Dr. Lebeouf's The Greatest Managing Principle in the World. His whole philosophy is what gets rewarded gets repeated. In it, he tells a terrific little parable about a fellow who is sitting in the middle of the lake on a warm summer day in a little boat. In one hand he had a bottle of bourbon, and in the other is a fishing pole.

All of a sudden he hears a bump against the side of the boat. He looks over and there is a little snake with a frog in its mouth. He felt sorry for the frog so he reaches down and takes it out of the snake's mouth. So he takes some of his bourbon, pours it into the snake's mouth, and he swins away happy. The frog, the snake and him. About 5 minutes later, he hears another bump on the side of the boat. He looks down and there is the same same with 2 frogs in his mouth.

The moral of the story is: "What gets rewarded gets repeated." Sometimes, unexpectedly, our store will become very busy. Although we have 30 cash registers, we still get lines. And as my son Stewie once said, "Dad, I've never met a customer who liked to wait in line.

So our office staff upstairs came up with an idea on their own, they come down to the store and help bag groceries to speed things up. Now every time a crowd develops, bingo, 15 people come out of nowhere and start to bag groceries to get rid of the lines. The customers are thrilled. How do you say thanks for teamwork like this?

We came up with our "ABCD" award shirt which I award personally to special people. Over the left pocket it says "Stew Leonard's ABCD Award." When they wear the shirt, their friends wonder what it stands for. They then explain that ABCD stands for "Above and Beyond the Call of Duty."

This sign is on every cash register. It is the last thing our cashier sees before she hands the money to our customer: "You hold our reputation in your hands." and they do.

Andrew Carnegie said, "Take away my factories, take away my machinery, take away my money, just leave me my people and we'll come back stronger than ever."

You can't do it alone.
Teamwork gets it done!
And the third secret is:
Excellence makes it better.

In 1985, Tom Peters and Nancy Austin wrote the international best seller, "Passion for Excellence". It has since been translated into 15 languages and has sold over 5 million copies worldwide.

I once heard Tom Peters say in a speech, all this stuff about excellence is really nothing more than "A blinding flash of the obvious." It's simple.

It is like rowing a boat upstream. It is simple, but it is hard to do. The minute you stop rowing, you start to slide backwards, and the minute that those of us who are running businesses, lose interest in it, we'll start to go backwards too.

Vince Lombardi, the great coach of the Green Bay Packers, said, "Excellence is not a sometimes thing, you have to earn it and re-earn it every single day." How true that is.

This sign hangs in our produce room. "If you wouldn't take it home for your mother, don't put it out for our customers." We don't want to fool anybody. We don't want you to get something home that isn't perfect. Some businesses think that fooling the customer is a big joke. Caveat Emptor. "Let the Buyer Beware."

I was in a restaurant in New York City not long ago, and I ordered a turkey sandwich. The waitress takes my order, goes into the kitchen, comes back and says, "I am sorry, but we are all out of turkey." I said to her, "That's Okay, I'll have a chicken sandwich then." She said to me, "Listen, if we had chicken, you would have had your turkey sandwich."

Where do we get ideas? We stumbled on this idea by accident. We heard of a great produce market down in Atlanta, Georgia. A guy named Harry Blazer owns it. I called him up. I said, "Harry, could I bring some of my people to see your fabulous market?" Was he mad? No way. He said, "Come on Down." We flew down to Atlanta, Georgia and as we were driving from the airport, we came up with three rules. The first is:

Let's each come back with one idea that we will champion and put into effect within 48 hours. As Tom Peters says in his book <u>In Search of Excellence</u>, "If you don't do anything about it in 48 hours, you are probably not going to do anything about it."

The second rule is, Let's not copy anything. Let's not go down there and copy something that they are doing and be a copycat. Let's build on it. Let's build on it. Let's be inspired by it. Let's learn from it.

And the third thing is, Let's not talk about anything negative. In fact, if we see something that we think we do better than them, let's share it with them. Make them glad we came. And we did. And it worked like magic. In fact, Harry Blazer then brought six of his people up to see us - after that, and he got ideas.

We now have a one idea club van that we drive up to 300 miles away. We could tell you almost every supermarket in our whole area. We have been to visit them. And they've been down to visit us. It's a win win situation. One hand washes the other.

We have focus groups. Focus groups are another way to strive for excellence. Who is better to teach you excellence than the customer? Once a month, in the morning, we have 16 customers that we invite at random from the store. We sort of look for a real sharp and successful buyer in our store. It is amazing how helpful they are.

My son Stewie, in the blue here begins by saying "You are all good customers. You probably have a lot of nice things to say about our store. But today, we don't have any time to hear them. We want to know what you <u>don't</u> like." "I don't like your fish, because it is not fresh." Stew said,

"What do you mean it's not fresh? Every day we go to the Boston Piers with our own truck, we go right to the fishing boat to bring the fish in fresh." "Yes, but then you put it in that plastic supermarket package, I like to buy it on crushed ice. I just don't but it." Stewie said, "But we only put it in plastic containers for your convenience."

Next morning we started work on our crushed ice fish department. The most incredible thing is that the packaged sales didn't go down. In fact, a week after we put the fish on the crushed ice we began selling another 15,000 lbs . And you know, she was right. Our sales had doubled, all this from listening to the customer.

Our customers also told us they didn't like to buy strawberries in the little baskets with the little ones on the bottom and the big ones on top and the rotten one in the middle. So we said, "Hey, maybe we can try selling the strawberries loose and let the customers pick their own out. But everyone told us it was a crazy idea because the customers would eat them while they were selecting them. And you know, they did eat them, but our sales tripled. Many customers now get to the register and find out that they now have a big beautiful $9.00 bag of strawberries.

So the 3rd secret is excellence

The fourth secret is WOW! and WOW makes it fun!

There is no slide here on purpose. When you fail to promote, a terrible thing happens. Don't be like the boy who winks at the girl in the dark.

Here is my son Tom. He's our Director of WOW's. We have these big, eight-foot robots that sing and dance and play the guitar on top of the frozen food. And the customers come in and they're all smiles and singing and happy and they're having a ball.

Here's another WOW!....If you spend a hundred dollars in our store, we'll give you a free ice cream cone. We are putting weight on everybody in Fairfield county.

There's our milk plant where we have tours and the customers have to walk by and see their milk being bottled, and it's exciting and a WOW! You would have to own a cow to get fresher milk than you get at the dairy.

There we have a little farm in front of the store...another WOW! Small animals, and the customers bring their kids and have a ball. WOW!

My daughter Beth has a bakery. The incredible WOW that she has is that you have to walk through the bakery to get through the store. They're on each side....They're making bread over here; they're making croissants over there; and she is in the middle giving out free samples. You just get a WOW!

Here's an international WOW! Our customers are our good will ambassadors, visiting countries around the world. Here's a customer who makes me say WOW. Her name is Colleen Blanchard. She brought our bag over to Russia and brought back a picture. She said, "Stew, I took he picture near the Kremlin." I said, "WOW" she's holding my shopping bag."

I was so proud of that picture that I tacked it on the bulletin board and then saw this other picture there...then this...then this...we even have one from all over the world with customers standing with our Stew Leonard's bag. We call them our good will ambassadors and we send them each a $3 gift certificate.

But I didn't know who to send the three dollars to for this one.

Some are out of this world

So there you have the four simple secrets that we've discovered about success in business. They work like magic for us because here is our store today.

SATISFY THE CUSTOMER!

TEAMWORK GETS IT DONE!

EXCELLENCE MAKES IT BETTER!

WOW MAKES IT FUN!

And just to add a little fun to our meeting today, I've brought a little surprise WOW for you!

Results of Recent Studies Examining The Effect of Need For Achievement and other Variables Upon Entrepreneurship

David C. McClelland
Boston University
and
McBer & Company
Boston, MA

Due to technical difficulties in recording Dr. McClelland's speech, his paper was not ready for the proceedings. A copy of the paper will be sent as an addendum.

Editor

WORKSHOP PAPERS

THE ENTREPRENEURIAL MIND

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ABSTRACT

In response to innovation: "Do it ... but be prepared to stop"
President, Entrepreneurial Firm

"Don't do it until you are absolutely sure"
Middle Manager, Large Corporation

It is generally recognized that entrepreneurs function differently from typical corporate managers. Insight regarding these differences can be gained from data collected on brain dominance preferences. Findings suggest that the entrepreneur prefers more experimental, conceptual, visual and holistic thinking (cerebral right) in contrast to the middle manager who prefers more safekeeping, organized and detailed thinking (limbic left). Application of the organizing principle of the specialized brain is also useful for maximizing individual and team creativity for successful venture development.

INTRODUCTION

My interest in entrepreneurship stems from a life long committment to assisting people to create work that is both satisfying and meaningful. When you create your own business venture, you have greater opportunity to control "how you would like it to be". As part of the business development process, it is important for the prospective entrepreneur to identify his or her unique talents, values, interests and style. It has been my experience that successful innovation is related to the ability of the individual to appreciate and use his or her particular mix of dualities, paradoxes, and aptitudes. Several years ago I was introduced to the work of Ned Herrmann. At that time, Ned was Manager of Management Development at General Electric, where he was working on a project to access and develop the creativity of the employees in the company. In the course of his research, he became fascinated with the implications of brain research which demonstrated the specialized functions of the different hemispheres. He subsequently designed a questionaire which became the basis for a profile for how an individual uses his or her specialized brain. As Ned began to collect data on a wide range of people, it became clear that different professions seemed to have specific profiles associated with them. I was intrigued

to learn that the profile of the entrepreneur was the mirror image of the successful middle manager. It seemed that this would be important information to look at when one is considering the possibility of taking "the leap". After working extensively with the profile, it became clear to me that not only was it a tool for career decision making, but also a wonderful framework to assist people to work together more effectively to foster creativity, innovation and entrepreneurship.

THE SPECIALIZED BRAIN AS AN ORGANIZING PRINCIPLE

The development of the brain dominance profile is based on scientific findings (i.e. Noble Prize winning research by Roger Sperry) that indicates different thinking functions in the different areas of the brain. There is still much, however, that is unknown and it is becoming clear that several areas of the brain interact together to accomplish tasks. Also, many of the items identified as being controlled by specific areas (i.e. intuition located in the right brain) are intuitive leaps. The model of the specialized brain, although a simplification of what occurs, is still of great value in developing insights into the dualities and differences in how people and businesses operate. It is also a wonderful organizing principle for understanding the creative process. Ned Herrmann combined the theories of the hemispheric brain and the concept of the triune brain described by David McLean at the National Institute of Mental Health and he came up with a 4 quadrant model. (See Figure #1). Basically, each of us has our whole brain available to us, however, we each have unique preferences in how we use our brain. Brain dominance is a preference for one or more areas of the specialized brain. The Herrmann Brain Dominance Profile does not measure competence, but there is a strong correlation between preference and competence. If we prefer certain brain functions, it is more likely and also easier to develop competencies in these areas. Our brain dominance affects everything we see, hear, think, say, feel, do and buy. It also influences the careers that we choose. For example, it would make sense that careers such as engineering and accounting that require logical, analytical step by step thinking would attract people with strong preference for the cerebral left. Whereas counseling and nursing which requires strong interpresonal skills and concerns for feelings, would attract prople with preference for the limbic right. Figure #1 shows the typical profile of the entrepreneur in contrast to the middle manager.

THE ENTREPRENEURIAL PROFILE

As it is clear from the diagram, the classical entrepreneur has a strong preference for thinking about possibilities. He or she is typically imaginative, sees things holistically and typically makes intuitive decisions. The entrepreneur does indeed have the ability to access other brain functions: to think logically and analytically, to plan and organize and to communicate effectively and develop relationships. All of this is necessary to build a successful business. However, the preference is clearly for the cerebral right. This particular balance of preferences seems well suited for developing a new and innovative

business. Too much logic might rule out a strong intuitive feeling about a new approach. Too much planning might delay a timely decision. Too much focus on interpersonal needs might keep the entrepreneur from doing an important task. And lots of visionary thinking is crucial. This profile of the entrepreneur was first discovered by Ned Herrmann when he did a study at the School for Entrepreneurs in Tarrytown, New York. He discovered that 78% of the already established entrepreneurs had the classical profile as pictured in Figure #1. It has been my experience that the full range of profiles is represented in successful business owners. This may suggest a subtle distinction about the entrepreneur as one who implements a new and innovative business, as compared to those who may venture out on their own with a more tried and validated idea. It should also be recognized that the nature of particular businesses may require different profiles (i.e. a technically oriented venture would necessitate a strong preference in cerebral right, whereas one providing business support services or a distribution network may require a preference in the limbic left, and those focusing on service would require a strong limbric right). Whatever the business venture, it is useful for the entrepreneur to examine his or her own preferred thinking style and explore the implications in terms of the tasks required by the particular venture and the strengths and pitfalls the person may encounter in relation to the role one plays in the venture team. It is also useful to examine the profiles of the other team members to explore how they can interact most effectively and to assess where additional input may be necessary.

THE CREATIVE TEAM

The major assumption that I base my work on, is that creativity depends on the use of the whole brain. Right brain imaginative, artistic thinking is not enough. Critical judgement, the ability to gather facts, to organize information, to plan goals, to interact effectively with a wide range of people are all equally important for a new and effective idea to be implemented. Also having different perspectives on a problem is an important element of creative thinking. It is useful to look at a problem from an analytical perspective, as well as a holistic perspective. Administrative implications and interpersonal considerations are important as well. Therefore diversity of perspectives is quite important to nurture in a team. Human nature as it is, we typically get annoyed with differences. Someone prefering the left brain may become impatient with what may be perceived as right brained "wiftiness". Another person preferring the right brain may be bored with left brained concern for detail, facts and a step by step approach. Once trained in the importance of the whole brain for creative thinking and innovation, team members begin to tolerate and even celebrate the differences among them. It is useful for the team leader to recognize and value the different styles of team members and learn how to effectively communicate with each and how to best use the different players for particular tasks and problem solving activities. The Whole Brain Creativity model is an excellent framework by which team members can learn a shared way of approaching entrepreneurship. An excellent representation of whole brain entrepreneurship is demonstrated by the song "Putting It Together" written by Stepheh Sondheim and sung by Barbra Streisand on he Broadway Album. The song described the process

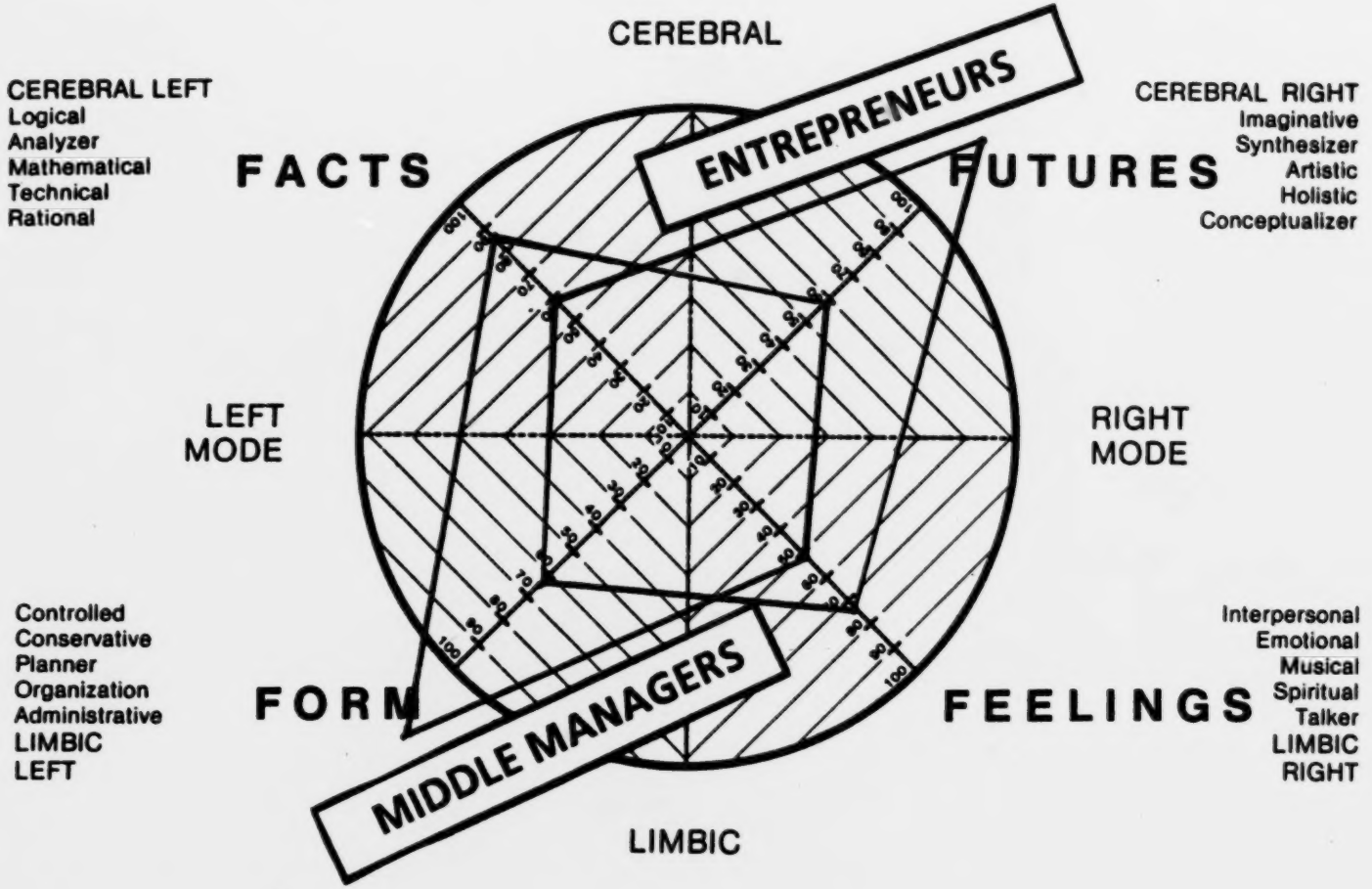
that Barbra had to go through to get a new idea (this particular record) accepted, financed and implemented. "Every little detail play a part. Having just a vision's no solution. Everything depends on execution."

CONCLUSION

An entreprenurial venture is best served by a strong visionary thinking style by its leader. However, for the business to function effectively, it is important to have a diversity of talent and thinking styles - the availability of a "whole brain" to assure competence in performing the necessary business functions and to give a broad range of perspectives for continued innovation.

FIGURE #1

HERRMANN BRAIN DOMINANCE PROFILE



SHEPHERDING INNOVATION AND ENTREPRENEURSHIP THROUGHOUT THE BUSINESS

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ABSTRACT

This paper gives five prescriptions to shepherding corporate wide innovations:

1. Taking new perspectives on problems
2. Pioneering innovation through innovation leaders
3. Implementing seven exigencies to develop innovation
4. Using a conceptual model to carry out an innovation audit
5. Sensing subtle change in a volatile world

INTRODUCTION

Innovation and entrepreneurship needs to be carefully orchestrated for it to reach through to all the interstices of the organization. Any prescriptions we give for businesses covering all aspects of the economy will be incomplete but the head and trunk, arms and legs of a skeletal approach is given in the five elements of this paper.

TAKING NEW PERSPECTIVES ON PROBLEMS

Innovation and entrepreneurship implies newness and change. They inevitably beg us to take new perspectives, new directions and to open up the boundaries within which we perceive problems and their subsequent solutions. Maier's (1) string is an excellent illustration of how different people define or perceive a problem or how the definition chosen leads us in the direction of particular types of solutions.

As the audience eagerly awaits the presentation, we present them with the conundrum of how to hold together the ends of two strings, one string being in each hand. The strings are attached to the ceiling and are so placed that participants cannot reach the second string while stretching and holding the end of the first one. On discovering this dilemma participants engage in some trial and error. This is followed by some clear problem definitions. They generally, though not always take the following sequence. Firstly, the problem is subliminally defined as "my arm is too short." Several participants share this viewpoint and readily supply rolled up newspaper and

other things to lengthen their arms. The help of a second person cannot be accepted by the would be problem solver. Secondly people begin to intuit the obstacle as "the string is too short." A ready supply of belts, ties or more string is then brought to the rescue by the problem solvers.

The third definition is typically that there is "a lack of an anchor." Fewer people define the problem in this light. The solution here is to move one string as near as it can go to the other string, anchor it in that position with such things as a chair, or table leg and then go and bring the other string to the anchored one. A fourth problem definition breaks free of the mould of "how can I get to the string?" to "how can I get the other string to come to me?" Here the pendulum approach is the one most often used, and sets of keys are tied to the end of one string while it is swung in the direction of the other string. The problem solvers just wait for the pendulum keys to bring the string to them. The quintessential innovation comes when we shift our thinking from one obstacle to another rather than finding various ways to overcome the same obstacle. All of the above problem definitions solved the problem, but the last approach lead to the most elegant solution. When we are faced with the need to be innovative, when old ways have failed, we need the freshness of a new perspective to lead us toward new paths of discovery.

A relatively recent example of a group gaining new perspectives on a problem occurred when a naval architect presented a problem to a group who had come together to practice innovative problem solving techniques. The architect described his problem as "How to store more food inside the inner skin of a nuclear submarine?" The inquiring minds asked "Why?" The reply was "So we can stay at sea longer without having to break surface to take on more stores." If the Navy could do this, then in lean times they probably could do with one less submarine. A submarine fully armed carries a one billion dollar price tag. There were other military advantages about which the group had to remain unenlightened.

The partially successful solutions to this problem developed since World War II have resulted in submariners eating their way into the rest room. Food has even been stored on the floor of the gangway down the middle of the vessel with wooden duckboarding being laid on top. The submariners progressively ate their way to full height in the gangway.

The group brainstormed for solution ideas. Drawing an analogy with the cramped space of astronauts, such things as food pellets were suggested. Emphatically, the architect felt the sailors would not be open to such a solution. Even hardy marines are never far distant from the P.X. and have had T.V. in their bunkers during war time conflicts. While many ideas were generated, the architect felt perhaps this lively and fertile group might have even more novel ideas to offer. The facilitator then took the group through imagining a technique which can follow brainstorming and involves word association together with forming and sharing visual imagery around a chosen word. This technique lead to the suggestion of blowing up the submarine with air, thus enlarging it. While proving infeasible it lead to someone else piggybacking on this idea and suggesting storing food between the inner and outer layers at both ends of the submarine. There is a big space here in case of collision and it is on all three levels of the submarine. The waterproof door would allow access. A solution had been found.

The architect had posed the problem of "how to store more food in the inner skin of the submarine." The group progressively broke through this skin, this boundary and arrived at a solution. The client was delighted and pointed out that the Navy had been short of space for storing food in submarines for 70 years. Merely by redefining the problem, we can be innovative and seize new opportunities that can be brought to fruition within existing resources. In this case a waterproof door gives access to this new space. This example also draws our attention to the need to involve people from both within and outside our field of expertise or our department. Not one member of this problem solving group had any direct experience of submarines, the Navy or even sailboats. Specialists, non-experts, or people with differing experiences, can battle the narrow specialist viewpoint which can lead to more innovative solutions and more commitment to their successful implementation.

PIONEERING INNOVATION THROUGH INNOVATION LEADERS

Gifford Pinchot, III, book "Intrapreneuring" (2) defined and brought into clear focus the Innovation Leader within the organization. His defining did not bring entrepreneurs into being, they have always existed. What he set about doing was directing our attention to their value within organizations and of how to foster and keep them within organizations. Boss Kettering is an example of such an innovation leader. When he was head of research and development at General Motors it took 24 days to paint a Cadillac. Entrepreneurs ever look for better, different and more efficient ways of doing things. True to form Kettering mused on this painting process and decided that the right length of time to paint a car was one hour. Kettering was told by General Motors staff that it was impossible. One day he was passing Tiffany's on Fifth Avenue, New York, and he saw a small beautifully lacquered box. Kettering tracked down the man who lacquered the boxes and this man showed Kettering how he sprayed the boxes and explained to Kettering that you could not paint a car this way as it was impossible. Kettering was undeterred. He worked with the inconsistencies in the arguments given by this craftsman and his staff to flesh out the problem and achieved the unattainable by developing a method of spray painting cars in one hour.

Steven Martin in working for the chemical conglomerate Ciba-Geigy set up his own incompany venture. It was stimulated by his habit of keeping close to the customer and learning their forecast of rapid growth in the soft lens market. Without further ado, he went directly to the president of his division with a proposal for a soft lens start up. It is said that if we do not act on our innovative ideas within 48 hours of their inception they are likely to flounder by the wayside. Indeed Napoleon invaded a Mediterranian Island and in 7 days establish a new system of government and a university. A first action step is often to communicate innovative ideas to others especially when the latter can help our progress toward a concrete end product. Martin headed a task force, was given $50,000 for outside consultants and together they drew up a business plan for the venture. Six months later a deal was struck to acquire technology from an overseas company whose lens material was in the final stages of testing by the U.S. Food and Drug Administration. Five years ago, Martin lead his embryonic business with a staff of two, his secretary and himself. From these small beginnings he has developed a $40 million business with 1,000 employees called Ciba Vision Care.

Nippon Steel of Japan do not depend on the lone wolf inventor or on fostering hardy entrepreneurs. They have thousands of innovating leaders heading their corporate quality circle networks. These leaders have developed 180,000 adaptive and novel solutions leading to a savings of $1 billion per annum from corporate costs.

IMPLEMENTING SEVEN EXIGENCIES TO DEVELOP INNOVATION

Some of the main criteria to consider in helping foster innovation and entrepreneurship are:

"Let the in-company innovator run the new business"

The entrepreneur should pioneer and volunteer for the venture. Even a mediocre idea supported by a champion of that idea has a greater potential for success than an idea with a bureaucratically appointed manager behind it. This self selection provides the glue to stick with the project.

Dick Drew of 3M was selling sandpaper. He noticed the difficulty his customers paint shop people had in masking cars for spray painting. Large areas of the car had to be masked with newspaper and held by library paste. The paint would then pull away with the library paste. Drew promised his customers that he would invent a tape to solve this problem. The final outcome was the 3M masking tape familiar to most of us but the success came only after hundreds of failures. By selecting himself Drew had the persistence to stay the course despite over 300 disappointments along the way. An organization with such a learning environment and ability to tolerate failure was also vital to Drew.

"Demand they find at least the first customer"

In having to get close to the customer innovators can set about to deliver a product or service that satisfies customers requirements. If the first attempt does not work, they can refocus the problem and try again. The entrepreneur needs to learn both from the customers and from their own mistakes. If they work in a vaccuum away from real life customers, the enterprise rarely succeeds. There is a classic story of how Charles Forte decided on the location of his first milk bar. He was given three location choices by his estate agent. He chose the least renovated and most expensive. "Why?" exclaimed the amazed estate agent. "Because", Forte replied "I stood outside each location for half a day and counted the number of mouths passing by."

"Allow corporate innovators to pass the business on to others"

Innovators often have real expertise for growing new businesses. The organization should capitalize on this and allow other managers to run the business at the more mature stages of the product life cycle. These corporate Entrepreneurs should, however, continue to share in the future profits of the original business. Transfer of the project, however, should not occur until it is well into the development stages. The originator is needed to put the

needed energy into surviving the first few inevitable crises. It is probably advisable to contract at the beginning of the venture on rights, authority, successions and so forth. Further, the organization should publicly announce its policy to change managers at different stages of the product life cycle. Demotion or failure should not be implied.

"Demand the in-company innovator shares in the risk of the new venture"

This can be achieved by deferring the company's bonuses (and salary reviews) pending the success of the new venture. However,the organization must be prepared to tolerate risk, failure and mistakes. Corporate entrepreneurs have an obsession with avoiding failure. Nevertheless, every new venture risks failure and people in these situations make mistakes. The question is whether they learn from them. If they do, they are more valuable to the business. One recalls how Art Fry failed in his first market test of "Post It." Hal Boese failed when he introduced non woven bra cups for 3M. He replaced his failure with lint free surgical masks that have massive sales to hospitals throughout the world.

"Be a real help and step in when needed"

All new innovations are at the birth stage of an organizational product life cycle. Therefore they are at great risk from established and even declining businesses. Innovators need a godfather to shield them from misunderstanding, jealousy, ignorance and attack. Innovators need help in focusing on their product, overcoming problems presenting to the Board, organizing their business, preparing business plans and marketing their products/processes or services. All these activities require a network of sponsors which innovators, with the help of their godfather, must develop. Similarly, a godfather must help with facilitating the resolution of interpersonal problems between the innovators and key members of their teams and others. Finally, relatively formalized coaching may be necessary in areas where the innovators own experience is lacking. Another aspect of coaching is a good understanding of how to invigorate groups and individuals with the art of innovative problem solving techniques.

"Do not pull the plug too soon and be patient with payoff"

It took Post-It from 1975 to 1982 to develop into a $40 million business and within three years it then reached sales of $200 million. Many would consider this worth the waiting. This is also of course where large organizations have a major advantage. Other already successful products can help cushion the embryo with little returns. It is often easier to assess progress and detect problems when the innovation is being incrementally introduced. There is ample opportunity for setting "go-no go" criteria along the way. With major innovations introduced rapidly, more investment may be lost but the rewards for success can be very large. Edwin Land (3), the inventor of the Polaroid camera, believed that neither the intuition of the sales manager nor even the first reaction of the public is a reliable measure of the value of a product to the consumer. Very often the best way to find out whether something is worth making is to make it, distribute it, and then to see, after the product

has been around for a little while, whether it was worth the trouble. This is advice that perhaps only the large corporation with considerable assets can follow unless a process of incrementalism is followed.

"The entrepreneur must get good reward for their efforts"

Controversy still surrounds this issue. However, if entrepreneurs do not get a fair financial reward, others in the organization may see this as a sign that the dedicated are exploited. Extra money can be given in the form of profit sharing, royalties, and bonuses. If the organization wants to try and ensure that the entrepreneur stays with the organization, then they may adopt the method of paying them slowly, but steadily over several years, contingent upon their staying in the organization.

Recognition is another important means of reward and often goes hand-in-hand with money. Mary Kay Cosmetics is famous for recognizing super sales people by presenting them with pink cadillacs and tickets for Hawaiian holidays. 3M has the equivalent of the Nobel Prize with their Carlton Award. Data General puts the names of the innovators on the patents. Recognition has always been important. The following advertisement appeared in the London Times in 1915.

> Men wanted for hazardous journey, small wages, bitter cold, long months of complete darkness, constant danger. Safe return doubtful. Honor and recognition in case of success.
>
> Ernest Shackleton

Sir Ernest was overwhelmed with thousands of requests to join his Antarctic expedition.

Promotion is yet another means of rewarding. It is a form of recognition and results in increased salary. Johnson and Johnson promise entrepreneurs who successfully develop new services, products or markets, the right to head the new business they create. As the business grows, they are promoted up to Divisional Vice President. In turn, they can promote team members who supported and helped implement the new product.

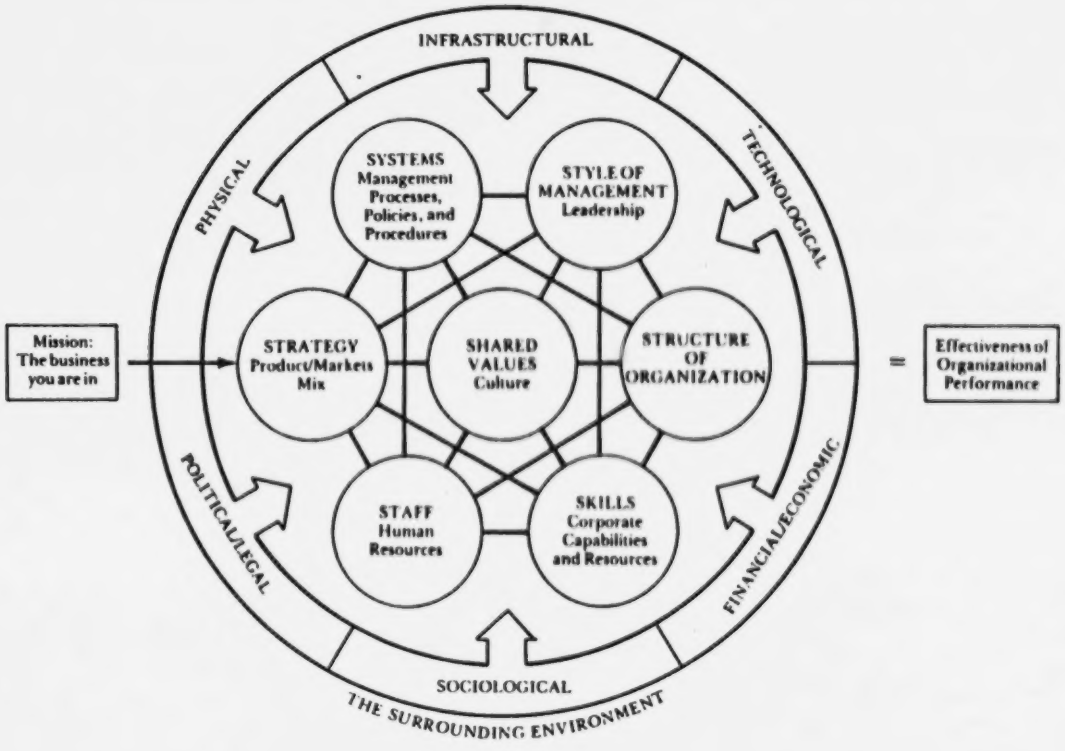
Giving freedoms to the entrepreneur is an essential reward. If the entrepreneur is given more money without freedom, they will eventually take their freedom and leave. Entrepreneurs need free time to think and pursue ideas and innovations. 3M gives staff 10% of their time to innovate or just attend conferences for new skills and ideas. IBM has a fellows program which allows successful entrepreneurs to pursue their research interest while being supported by an impressive stipend. Entrepreneurs, especially those with a proven track record, should have access to seed money, for example in the form of a special drawing account. This avoids the necessity of having to beg for money at every stage of the innovation.

USING A CONCEPTUAL MODEL TO CARRY OUT AN INNOVATION AUDIT

In 1982, "In Search of Excellence" stormed the world and in one brief page

mentioned a McKinsey management consultancy model called the "Seven S model." We have used the model extensively since 1980 and substantially amended it to more adequately attend to organizational mission, organization inputs and outputs and to more adequately deal with the effect of the surrounding environment as shown below.

THE SEVEN S MODEL



Source: Lippitt, G., Langseth, P. & Mossop, J. Implementing Organizational Charge. San Francisco: Jossey Bass, 1985. Adapted from Peters & Waterman, 1982.

The model has been used in this paper as marker posts for carrying out an organizational wide innovation audit.

We will briefly outline the key factors to take account of within the 7 S framework when trying to determine the extent to which an organization is open or closed to innovation. A by product of using these factors is to highlight areas that may need changing if an organization wants to move closer to having a more innovative and entrepreneurial type environment.

Shared Values

These are the beliefs shared strongly by all the people of the organization that guide everyone in how to do business with their customers, suppliers, their staff and society at large. An analysis of shared values is a foundation for seeking out innovations or in some cases for deciding that they are too harmful for the public and the corporate well being. The shared values are central in auditing an organizations boundaries and propensity for innovation.

Staff

Innovation only comes from the minds and hands of the staff of your organization. Corporate values that emphasize innovation will guide staff and their leaders to try but innovation will only burst into flames from the efforts of the staff. Interviews and discussions with staff can bring to light those rules, behaviors, systems and so forth that nurture or starve innovations and entrepreneurial endeavors. There will be stories of failed and successful innovations and there will be frustrated entrepreneurs along with those currently running successful new ventures. Obviously, lack of evidence of innovation and entrepreneurship suggests staff do not and most likely cannot move outside pre established boundaries.

Skills

Innovation and entrepreneurship from staff is utterly dependent on their literacy in those areas. We would not expect our books to be kept correctly by people illiterate in accountancy. Yet, we oftentimes expect innovation to burst forth without training. People need help when running an entrepreneural unit. Similarly innovate problem solving techniques are useful for the innovator. A training needs analysis in these areas should quickly identify whether training should be provided and what exactly is needed.

Strategy

The strategy of the business is the overall direction that the business takes in guiding the company in the products it makes, its effect on employees and the markets it penetrates. Strategy emerges from the corporate values and from the opportunities and constraints of the market place. An audit here will include examining the top management choices in some of the following areas. Firstly, what are the organizational goals for innovation and entrepreneurship? For example, is the goal to maximize efficiency or cut costs, improve service or develop new products? The goals will differentially help or hinder innovation. Secondly, are dollars allocated to product or process innovation or both? Are resources allocated sparingly and incrementally or in one large outlay? Thirdly, is the organization open to radical innovations and therefore to taking substantial risks or does it hedge its bets and try a little at a time? Forthly, is the organization a follower or a leader? Does it go out first with a new product or wait and see what the competitors produce? Fifthly, is the organization oriented to a long term perspective, will it wait for payoff or kill off an entrepreneurial endeavor at the first sign of loss?

Structure

Structure is a very important aspect of organization as it establishes who does what on an ongoing basis within the organization. There is no best way to structure for innovation and entrepreneurship. However, the structure to foster both should flow from the chosen organizational strategy. This is key to structuring for innovation. Auditing structure will involve looking for evidence of flexibility in at least parts of the organizational structure. This is expressed in temporary and parallel organizations in "skunk works" "business units", offices of innovation and the like. Structure is one of the last things an organization wants to tamper with, as the other S's in this model, can have much more immediate results and be relatively less painfully changed or remodeled.

Systems

These are all the procedures, processes, programs formal and informal that make an organization go day-by-day. Systems play a large part in how things get done. Auditing all systems can show whether each facilitate the giving of time and money to help innovative and entrepreneurial endeavors to occur. They also need to provide exceptions to policy. Further the organization needs systems that scan the environment to determine what customers, competitors, suppliers, government and so forth are up to and thus, feeding back to the organization necessary information for innovative enterprises. The organization systems need to foster cooperation, an essential for the entrepreneurs. Also the reward system needs to be flexible enough to reflect the different talents, endeavors, and risk taking abilities of the staff.

Style

The managerial leadership is what is described as the style. It is the signals that the organization give staff as to what is really important. An audit of style will assess how managers themselves behave. Do they voice the need for innovating, but never personally take any risks and promote the loyal and the obedient? Do they extol the virtues of keeping close to the customer while dismissing customer complaints as trivial? The best way to transmit the importance of being innovative and entrepreneurial is by behavior. Management behavior should be closely scrutinized in this regard.

SENSING SUBTLE CHANGES IN A VOLATILE WORLD

Corporate innovation can be a response not only to clearly measurable external or internal changes but result from an sensing of the subtle changes that are ar inherent part of a volatile world. The true innovative leader quickly p:cks up the scent of these changes and deftly leads into the competitive battle by an innovative response. There are basically two approaches to sensing these less obvious changes or competitors.

The first approach is to undertake analytical business intelligence. The methods are borrowed from those of analytic military intelligence. It is basically a search for and an analysis of all actual and likely stakeholders

in our business. The aim is to seek out opportunities to innovate. One particular company analyzed the job advertisements of a competitor, over a period of time. They discovered that the competitor was hiring less chemical research engineers than had previously been their practice. Anticipating that the resources and need for research of this kind would increase in the near future, they hired more research engineers than current demand warranted. These recruits began developing new product niches and were already on board when the demand for their research and the ensuing innovations increased.

The second approach is an intuitive one. The early founders of Hoffman La Roche, the Swiss Pharmaceutical company decided in the 1920's to buy the patent on vitamins sensing that this would become a new major product. The market at the time was practically non-existent. They sensed that they were on the trail of a winner and they were correct. Similarly Mr. Kroc received an unprecedented order for seven milk shake making machines that could jointly dispense 56 drinks. His curiosity prompted him to personally deliver the machines to a fast food restaurant owned by the McDonald brothers. He sensed that he had chanced by a rare opportunity. He acted quickly and franchised the world's best known restaurants. In 1960 he was offered the McDonald's business for the then outrageous price of $2.7 million. Everyone advised him that the price was excessive. His intuition told him to buy,and time has proven the worth of his intuition as McDonald's is a world wide American institution.

Changes are facing us in all aspects of our environment and perhaps we are also in a long wave cycle of innovation. In Germany, the population is declining because of the lowest birth rate in the world, affecting markets and potential work forces alike. In Britain the government are to sell off $20 billion of publically owned companies over 4 years making local capital more scarce for other corporate investment. Kenichi Ohmae, Managing Director of McKinsey Consulting Group, Japan, sees evidence of six simultaneously occuring revolutions in Japan. They extend from the home and office, to technology and production, to distribution and the international market. The international revolution he sees as resulting in a triad, made up of Japan, North America and Europe and constituting a new super community.

Corporate innovations must be ever vigilent in scanning their environment even for subtle changes, that may become dramatic and even devastating to some organizations once their effects are fully realized.

LAST WORD

A friend of ours Ann Faber, of the Center for Creative Leadership, gives away lapel badges that say "Don't believe all you believe." As borrowers fron contingency theory, we know that the ideas here presented are like maps given to discoverers. Not all take you to the destination you seek, though hopefully some will.

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NEW BUSINESS IN AMERICA: A REPORT ON RESEARCH IN PROGRESS

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Since publication of the Job Generation Process, a renewed interest and appreciation has been exhibited for the people and process involved in business formation. Yet, the subject matter of this renewed interest remains elusive. The principle reason for the rather bleak "state of the art" has been the lack of data, particularly a large and representative file of new business owners.

In cooperation with the National Federation of Independent Business (NFIB), a large and representative file of new business owners has been developed. With that file serving as a foundation, a three-year panel study entitled, New Businesses in America: The Firms and Their Owners, has been initiated. This brief paper is a progress report on the panel study and includes the marginal results from the "Year 1" questionnaire as well as a copy of the "Year 2" follow-up.

Study Conduct

The research design for this project is elementary in concept. A sample was to be drawn of business owners who were in their first year of operating a specific firm. Each member of the sample would then be mailed a questionnaire, subsequently termed the "Year 1" questionnaire. This questionnaire would be designed to provide basic information on the state of the firm, the background and preparation of the owner, owner goals and objectives, the process of entry, the owner's evaluation of the market, and the date of the first cash sale as a check on the veracity of our original data file. Exactly one year later the "Year 2" questionnaire would be mailed. Its focus was to be on change occurring in the firm and in the owner over the preceding 12 months. A "Year 3" questionnaire would follow in yet another year, ending the formal data collection process.

In practice, matters are considerably more complex than the simple outline presented above. Non-respondents must be carefully tracked to determine whether or not they remain in business; checks must be placed in each questionnaire and comparisons made to ensure that the same person responds to each inquiry; and, data management problems are horrendous. At different times, as many as seven data files containing each respondent must be sorted and merged in order to produce the final file which is expected to contain approximately two million pieces of information.

Sample

The study sample was drawn directly from the membership files of NFIB. All owners in that file who were designated to have been in business one year or less when they became NFIB members were eligible for selection. Thus, a selected owner was not necessarily a first time business owner, but he was one new to the current operation.

Since the universe of new businesses and its demograpnic profile is unknown, the representativeness of the NFIB sample cannot be verified. However, there is considerable reason to believe it is a good approximation. First, the demographic composition of first year respondents compares favorably with what we know of the total small business population and intuitively suspect about the new business population. In the same vein, the profile is similar to a count of new business registrations in the province of Ontario, Canada, an area stretching a thousand miles on our northern border. Second, firms enter the file by random means. NFIB maintains a large field force which scours the country for new members. Any business owner is eligible for membership, and it is to the field force's advantage to enlist as many as possible. The premium is on newness, not on size, industry, etc. Therefore, there is an incentive to locate new businesses as well as seek referrals about new businesses from other members. Finally, even if the sample did not represent the universe, it represents more than 500,000 (about 1 of every 8 employers) NFIB members, a significant portion of the entire population in itself.

"Year 1" Questionnaire

In May, 1985, the "Year 1" questionnaire was mailed to just over 13,000 business owners who had indicated through personal interview that they had owned "this particular" firm for one year or less. Three mailings at 2 1/2 week intervals were sent the sample. A total of 4,814 useable responses were received for a 38% response rate. Since in business for one year could mean up to 18 months, and since some firms could have been in the file nearly 12 months prior to questionnaire receipt, it was anticipated that an unspecified portion of the sample and hence questionnaire respondents would be "aged." Therefore, the 2,994 respondents who indicated on the questionnaire that they had been in this business less than 18 months were isolated for particular examination and serve as the basis for the marginal results that follow:

Table 1

SOURCES OF LABOR IN NEW BUSINESSES

Number of Employees		Hours Worked by Owner		Unpaid Family Members Number		Unpaid Family Members Hours Worked		Number of Full Time Partners	
Self	- 15	1-49	23	Self	- 15	None	- 52	None	- 69
Two	- 23	50-59	23	Two	- 23	1 - 9	- 13	One	- 20
Three	- 17	60-69	28	Three	- 17	10-19	- 10	Two	- 7
Four	- 12	70-79	13	Four	- 12	20-29	- 8	Three	- 2
Five	- 8	80 +	12	Five	- 8	30-39	- 4	4 or More	- 1
6-9	- 12	N/A	1	6-9	- 12	40 +	- 13		
10 or More	- 10			10 or More	- 10				
N/A	- 3			N/A	- 3				
Total	100%	Total	100%	Total	100%	Total	100%	Total	100%

Table 2

CURRENT AND EXPECTED SALES IN NEW BUSINESS

GROSS SALES	First Year Sales	Expected Sales in Two Years
Under $29,000	14	6
$30,000 - $59,999	15	10
$60,000 - $99,999	14	10
$100,000 - $299,999	27	33
$300,000 - $499,999	7	10
$500,000 or More	14	21
No Answer	9	10
Total	100%	100%

Table 3

RELATIVE IMPORTANCE OF SELECTED BUSINESS GOALS

RANK OF BUSINESS GOAL	Business Goals			
	Kind of Work I Want to Do	Avoid Working for Others	Make More Money	Build Successful Organization
Most Important	26	18	18	29
Second	23	21	21	23
Third	20	22	24	21
Fourth	17	23	22	14
No Answer	14	16	15	13
Total	100%	100%	100%	100%

Table 4

DESCRIPTION OF NEW BUSINESS AND OWNERS

EXTENT OF AGREEMENT	Operating Controls in Writing	More Comfortable With Technical or Selling Problems	Firm is Changing Rapidly	Comfortable Living Enough Success
Agree Strongly	16	13	26	20
Agree Somewhat	25	25	35	36
Neither Agree Nor Disagree	36	30	21	11
Disagree Somewhat	12	18	10	19
Disagree Strongly	7	10	4	11
No Answer	4	4	4	3
Total	100%	100%	100%	100%

Table 5

MISCELLANEOUS DEMOGRAPHICS
OF NEW BUSINESS OWNERS

Number of Jobs Prior to Firm Formation	
None/NA	- 5
1" - "3	- 46
4" - "5	- 26
Over 5	- 23
Total	100%

Age of Owner	
Under 20	- 1
20" - "29	- 25
30" - "39	- 38
40" - "49	- 24
Over 49	- 11
Over 49	- 11
Total	100%

Table 6

PERCENT OF TOTAL MARKET STRATEGY
BY TYPE OF STRATEGY

TYPE OF STRATEGY	Percent of Total Market Strategy								
	0% or N/A	1 - 9%	10 - 19%	20 - 29%	30 - 39%	40 - 49%	50 - 59%	60% +	Total
Lower Prices	51	5	15	12	6	3	4	4	100%
Better Service	18	2	13	21	14	9	12	11	100%
More Choices/Better Selection	9	6	17	11	3	1	2	1	100%
Reputation for Quality	24	3	18	22	13	6	7	7	100%
Advertise More Effectively	69	10	15	4	1	*	*	*	100%
Target Missador Badly Served Customers	56	8	20	10	3	1	1	1	100%
Select Superior Location	76	6	10	4	1	1	1	1	100%
Better Appearance or Facilities	65	8	16	7	2	1	1	1	100%
Product/Service Not Now Available	69	6	11	6	2	1	2	3	100%

Table 7

PERCENT OF TOTAL FUNDS USED IN BUSINESS
BY SOURCE OF FUNDS

SOURCE OF FUNDS	Lower Percent of Total Funds							
	0% or N/A	1 - 19%	20 - 39%	40 - 59%	60 - 79%	80 - 98%	98 +	Total
Personal Savings	28	14	14	11	5	4	24	100%
Friends/Relatives	73	5	7	6	2	3	4	100%
Investors (not friends/ relatives)	93	1	1	2	1	1	1	100%
Government Loans/Guarantees	97	*	*	1	1	1	*	100%
Lending Institutions, e.g. Banks	56	3	6	9	7	10	9	100%
Venture Capital Firms	99	*	*	*	*	*	*	100%
Supplies; Trade Credit	94	2	2	1	*	*	*	100%
Former Owner	92	1	2	2	1	1	1	100%
Other	98	*	*	1	*	*	1	100%

BEST COPY AVAILABLE

NEW BUSINESSES

Please **mark** the best answer

1. Please classify your **major** business activity, using one of the categories of examples below. (If more than one applies, mark the one which contributes the most toward your gross sales or total revenues.)

8 [1] Construction (general contractor, painting, carpentry, plumbing, heating, electrical, highway, etc.)
8 [2] Manufacturing and mining (including dairy processor, printer, publisher, etc.)
2 [3] Transportation, travel agency, communication, public utilities (truckers, movers, broadcasters, etc.)
4 [4] Wholesale (including grain elevator, livestock dealer, distributor of equipment, manufacturer's rep., etc.)
46 [5] Retail (including service station, restaurant, bar, radio and TV store, drug store, florist, apparel, etc.) 1
3 [6] Agriculture, veterinarian, forestry, landscaping, fisheries, etc.
5 [7] Financial, insurance, real estate, bank, savings & loan, etc.
19 [8] Beauty salon, barber shop, garage, motel, hotel, repair service, bookkeeping service, photographer, funeral director, rental agency, credit bureau, laundry, etc.
5 [9] Physician, dentist, attorney, engineer, architect, accountant, skilled nursing care facility, etc.
1 [10] Other (please describe) _____

2. When did your firm register its first sale (under your ownership or principal management)? (Circle a year **and** a month)

YEAR	MONTH			
[1] 1985	[1] Jan	[5] May	[9] Sep	2
[2] 1984	[2] Feb	[6] Jun	[10] Oct	
[3] 1983	[3] Mar	[7] Jul	[11] Nov	3-4
[4] 1982 or before	[4] Apr	[8] Aug	[12] Dec	

2a. How long was it between your first business expenditure of $500 or more and your first cash receipt (sale)?
[1] less than one month [2] _____ months between (number) 5-6

3. On average how many full and part-time employees do you have (including yourself)? 7-8
_____ full-time _____ part-time Table 1 9-10

4. How many **unpaid** family members are there that work for the firm? (Include children that are paid some type of small payment.)
_____ unpaid family helpers Table 1 11

4a. How many hours per week **in total** do these unpaid family members work? _____ total hours of work per week Table 1 12-14

5. About how many hours per week do **you** work for the firm? _____ hours per week Table 1 15-16

6. In your first year of business, did/do you have:
8 [1] A full-time job outside of your firm
7 [2] A part-time job outside of your firm 17
4 [3] Irregular work outside of your firm (exclude military reserve, etc.)
78 [4] No job outside your firm
3 N/A

7. In your first year of business, did/does your spouse or other adult family member residing with you, have an income-producing job other than working for your firm?
13 [1] No spouse at time
34 [2] No, no job
35 [3] Yes, spouse, full-time
11 [4] Yes, spouse, part-time 18
3 [5] Yes, other member, full-time
1 [6] Yes, other member, part-time
3 N/A

8. What do you estimate that your gross sales or revenues were/will be in your first year of business?
$_____.00 Table 2 19-24

9. How large do you expect your gross sales to be in **TWO** years? $_____.00 (gross annual sales) Table 2 25-29

10. What percentage of these sales came/will come from the sale of **franchised** goods or services?
70 [1] None 3 [3] 10%-24% 5 [5] 50%-74% 3 [7] All 30
5 [2] Under 10% 4 [4] 25%-49% 7 [6] 75%-99% 3 N/A

10a. Does your firm operate under a franchise name, e.g., McDonald's, Ford, Texaco?
11 [1] Yes 87 [2] No 3 N/A 31

11. How did you become owner or principal manager of your present business?
64 [1] Started it
30 [2] Purchased it (not from family)
2 [3] Inherited it or purchased from family
1 [4] Promoted by other owners
3 [5] Brought in by other owners 32
1 [6] Other _____

12. When you went into your business, what were your most important goals? (Indicate with a "1" the most important goal, a "2" the next most important goal, a "3" the third most important goal and a "4" the fourth most important.)
_____ a. To let you do the kind of work you wanted to do 33
_____ b. To avoid having to work for others Table 3 34
_____ c. To make more money than you would have otherwise 35
_____ d. To build a successful organization 36
_____ e. Other _____ 37

13. Why did you go into your business at the **time** you did? (Mark **one** only.)
38 [1] A good opportunity came along and I jumped
43 [2] Had been seriously considering a long time; things finally came together
13 [3] It was the best alternative available at the time
13 [4] Thought I might someday; something happened to force my hand
3 [5] Other _____ 38

14. Where did you get the **idea** to go into this kind of business? (Mark **one** only.)
42 [1] A prior job
6 [2] A family business
6 [3] Activities of friends or relatives
18 [4] A personal interest or hobby
8 [5] Someone suggested it
6 [6] Education or courses
10 [7] A chance happening of some type
4 [8] Other _____ 39

15. How old were you when you became owner or principal manager of your present business? _____ years old Table 5 40-41

16. Did you move your residence in order to go into your business?
79 [1] No
6 [2] Yes, under 50 miles
5 [3] Yes, 50-150 miles
10 [4] Yes, more than 150 miles 42

17. Were there other **full-time** partners or investors involved when you became the owner or principal manager of your business?
[1] Yes, _____ partners (number)
[9] No Table 1 43

18. Where did you work just before you went into your present business?
16 [1] Worked for a large business (more than 1000 employees)
12 [2] Worked for a medium business (between 100-999 employees)
46 [3] Worked for a small business (less than 100 employees)
14 [4] Had my own business
5 [5] Worked for a non-profit organization (military, teacher, etc.)
6 [6] Not in the labor force (student, housewife, etc.)
1 N/A 44

19. Before going into your present business, what was your **highest level** of management experience?
19 [1] No subordinates; supervised no one
39 [2] Supervised workers (office, shop, etc.)
11 [3] Supervised one or more managers
26 [4] Managed or owned own business
4 [5] Other
1 N/A 45

20. Which best describes the major reason for leaving your previous job: (Mark **one** only)
10 [1] Job was discontinued (firm failed, reorganized, etc.)
8 [2] Was laid off, fired, or on strike
7 [3] Quit, without specific plans
53 [4] Quit because of plans for the current business
19 [5] Left, closed down, or sold my own firm
7 [6] No previous job or already with this firm 46

21. How different is your present business from the organization you were just in? (Please indicate the degree of difference on a scale of 1 for "no difference" to 5, "very different")

	No Difference				Very Different		
a) Product or Services	1 31	2 11	3 9	4 5	5 39	5 N/A	47
b) Customers	1 39	2 12	3 12	4 7	5 33	7 N/A	48
c) Suppliers	1 30	2 9	3 9	4 6	5 38	8 N/A	49

22. Did your parents (or guardians) ever own their own business?
45 [1] Yes 54 [2] No 1 N/A 50

23. What level of **formal** education did you have before you went into your current business? (Do **not** include a degree or certificate earned in a vocational or technical school.)
3 [1] Less than high school
5 [2] Some high school
32 [3] High school graduate
26 [4] Some college; no degree
8 [5] Some college, associates degree
16 [6] Bachelors degree
3 [7] Some graduate school
1 [8] M.B.A.
4 [9] Other advanced degree
2 [10] Other _____ 51

23a. How many courses did you take in business subjects, e.g., management, marketing, personnel, finance, accounting?
38 [1] None 33 [2] 1 or 2 18 [3] 3 to 6 9 [4] 7 to 12 10 [5] 13 or more 2 N/A 52

24. Have you taken any technical, vocational, or professional development courses or training?
57 [1] Yes 41 [2] No 2 N/A 53

24a. If "yes," which describe(s) that course(s) or training? (Mark **all** that apply)
35 [1] A structured program leading to a certificate, degree or license 54
9 [2] High school vocational courses 55
7 [3] Occupational training received on active military duty 56
19 [4] Occasional courses to learn business skills useful in just about any kind of business. 57
34 [5] Occasional courses to learn new skills, new techniques, new products, etc., found in my kind of business. 58
10 [6] On-site employer (non-military) sponsored training to learn business skills useful in just about any kind of business. 59
16 [7] On-site employer (non-military) sponsored training to learn new skills, new techniques, new products, etc., found in that kind of business. 60

25. How many full-time jobs (with different organizations; count military service as one job) did you hold from the time you left school until you entered your current business?
full-time jobs Table 5 61 62

26. Is your business currently located in your own home (including garage, basement, wing, etc.)?
7 [1] Yes 92 [2] No 1 N/A 63

27. Eighty percent (80%) of my business comes from customers located within a radius of:
2 [1] 1 mile 21 [3] 10 miles 19 [5] 50 miles 7 [7] more than 100 miles 64
10 [2] 5 miles 31 [4] 25 miles 9 [6] 100 miles 1 [8] don't know

28. During the next five years, how much average change **per year** do you expect in the market you are trying to serve:

	Increase Over 20%	Increase 20% to 11%	Increase 10% to 3%	Unchanged (+2% to −2%)	Decrease (−3% or more)	Don't Know	
a) The number of customers will:	1 40	2 23	3 20	4 5	5 1	6 8	3 N/A 65
b) The number of competitors will:	1 6	2 8	3 23	4 37	5 6	6 16	4 N/A 66
c) Total sales for all firms providing my kind of product/services will:	1 18	2 21	3 27	4 11	5 3	6 15	5 N/A 67

29. When you were planning your business, what sources of information or help were important to you? Please rate **each** source below as follows:

	Very Important	Somewhat Important	Little Importance	Not Used	
a. accountant; bookkeeper	1 46	2 20	3 10	4 17	5 N/A 68
b. friends or relatives	1 26	2 29	3 21	4 18	6 N/A 69
c. other business owners	1 28	2 33	3 17	4 17	6 N/A 70
d. government programs or information sources	1 6	2 9	3 18	4 58	9 N/A 71
e. bankers	1 34	2 33	3 15	4 33	5 N/A 72
f. trade organizations	1 9	2 17	3 21	4 45	8 N/A 73
g. lawyers, attorneys	1 30	2 33	3 20	4 30	9 N/A 74
h. generally available books, manuals, etc.	1 18	2 24	3 20	4 33	6 N/A 75
i. franchisors or suppliers	1 38	2 19	3 13	4 24	7 N/A 76
j. courses, seminars, workshops	1 11	2 14	3 16	4 54	7 N/A 77
k. other _____ (please explain)	1 6	2 1	3 1	4 18	94 N/A 78

30. From the list below, how would you describe your business strategy. Using a TOTAL of 100 points, please assign points to each item below that reflects its importance in your business strategy. A blank is 0 points. For example, if "low prices" were your major strategy with "better service" receiving secondary emphasis, you might assign 70 points to "low prices" and 30 points to "better service" leaving the rest blank to indicate they are not receiving **special emphasis** in your strategy. (Please read the entire list before scoring.)

_____ Try to keep prices lower than my competitor 79 80
_____ Try to provide better service than my competitor 81 82
_____ Provide more product or service choices and selection than my competitors 83 84
_____ Try to build a better reputation for quality 85 86
_____ Try to advertise more effectively 87 88
_____ Try to target customers missed or poorly served by my competitors 89 90
_____ Select a superior location 91 92
_____ Have a better appearance or better facilities 93 94
_____ Provide a service or product otherwise unavailable 95 96
100 points TOTAL

Table 6

31. For each statement, write the number which indicates the extent to which you agree or disagree with each statement.
[1] Agree strongly [3] Neither agree or disagree [4] Disagree somewhat
[2] Agree somewhat [5] Disagree strongly

Table 4

a) _____ Making a comfortable living is enough success 97
b) _____ In my business, operating controls and methods are in writing 98
c) _____ I am most comfortable in selling or handling technical problems rather than working on management issues 99
d) _____ My business is changing rapidly 100

32. Has your business been assigned a Dun & Bradstreet number?
30 [1] Yes 55 [2] No 14 [3] Don't know .1 N/A 1

33. What is your sex?
77 [1] Male 22 [2] Female 1 N/A 2

34. Are you a racial or ethnic minority as defined by the federal government?
6 [1] Yes 92 [2] No 2 N/A 3

35. What was the total amount of capital invested in your business by the **time you made your first sale?**
17 [1] Under $5,000 35 [4] $20,000-$49,999 3 [7] $250,000-$499,999
14 [2] $5,000-$9,999 15 [5] $50,000-$99,999 1 [8] $500,000 or more 4
16 [3] $10,000-$19,999 8 [6] $100,000-$249,000 2 N/A

52

36. Of the above amount, please indicate approximately what percentage of the original funds invested in your firm came from:

_____% Your personal savings		5-6
_____% Friends or relatives		7-8
_____% Individual investors (not friends or relatives)		9-10
_____% Government or government guaranteed loans	Table 7	11-12
_____% Bank, S&L or other lending institution		13-14
_____% Venture capital firms or other investment companies		15-16
_____% Suppliers (trade credit)		17-18
_____% Former owner(s) of the business		19-20
_____% Other (please describe) _____		21-22
100% TOTAL		

37. What percent of this business do you (including your spouse and children) own?

6	[1] Prefer Not Answer	3	[3] 75%-99%	6	[5] 25%-49%
63	[2] 100%	15	[4] 50%-74%	4	[6] Under 25%
				3	N/A

23

38. What are the odds of **any business like yours** succeeding, e.g., 1 chance in 10, 2 chances in 10, etc.?

No chance of success											Certain chance of success	
4	3	5	7	6	39	8	11	13	5	10	4	N/A
0	1	2	3	4	5	6	7	8	9	10		

24

39. What are the odds of **your** business succeeding, e.g., 1 chance in 10, 2 chances in 10, etc.?

No chance of success											Certain chance of success	
4	1	1	1	1	10	4	9	18	19	32	4	N/A
0	1	2	3	4	5	6	7	8	9	10		

25

PLEASE DO NOT REMOVE THIS LABEL

(Used for compiling geographic information)

40. How important were each of the following factors in your decision to go into your business? (Indicate the degree of importance on a scale of 1 for "Very Important" to 5 for "Not Important")

	Very Important				Not Important		
a. Liked the challenge	1 49	2 35	3 13	4 3	5 5	5	N/A
b. Gained greater respect and recognition	1 19	2 31	3 33	4 13	5 18	6	N/A
c. Build something for my family	1 54	2 19	3 12	4 5	5 5	5	N/A
d. Earn lots of money	1 20	2 26	3 31	4 11	5 6	6	N/A
e. Have greater control over my life	1 57	2 22	3 10	4 3	5 4	5	N/A
f. Fulfill expectations others had for me	1 9	2 13	3 17	4 14	5 43	6	N/A
g. Use my skills and abilities	1 59	2 22	3 8	4 3	5 3	5	N/A
h. No better alternatives	1 7	2 5	3 13	4 11	5 57	7	N/A
i. Live where and how I like	1 33	2 19	3 17	4 8	5 17	6	N/A

a. Liked the challenge	26
b. Gained greater respect and recognition	27
c. Build something for my family	28
d. Earn lots of money	29
e. Have greater control over my life	30
f. Fulfill expectations others had for me	31
g. Use my skills and abilities	32
h. No better alternatives	33
i. Live where and how I like	34

YOUNG BUSINESSES

Please **mark** the best answer or fill in the blank as appropriate

1. About how many hours per week do **you** work for the firm? _____ hours per week 1-2

2. About how many hours per week **in total** do unpaid family members work?
_____ total hours of work per week. 3-5

3. On average, how many full and part-time employees do you have (including yourself)? 6-8
_____ full-time _____ part-time 9-10

4. Were any of the employees **added** in the last twelve months hired as managers or supervisors of other employees in your firm?
[1] Yes [2] No [3] No employees added 11

5. Are other full-time partners or investors (other than yourself) now involved in your business?
[1] Yes, _____ partners (number) [9] No 12

6. About what were your firm's gross sales or revenues during the last twelve months or during your last fiscal year?
$ _____.00 13-17

7. How large do you expect your gross sales to be in ONE year? $ _____.00 (gross annual sales) 18-22

8. Comparing the total assets of the firm today to total assets of the firm twelve months ago, about how much have total firm assets changed during the last twelve months? (Total assets include the value of all equipment, buildings, vehicles and land owned by the firm as well as cash, inventories and supplies and accounts receivable)

[1] Increased [2] Stayed about the same [3] Decreased 23

8a. If "increased" or "decreased", by approximately what percentage? _____ % 24-26

9. Which of the following have been major sources of **new** funds during the past twelve months? Please put a "1" next to the most important source of new funds, a "2" next to the second most important source, and so on. Leave blank those sources not used.

_____ funds from company earnings 27
_____ additional funds from owners who were owners of record 12 months ago 28
_____ funds from new (less than 12 months) owners or investors 29
_____ loans from banks or other financial institutions 30
_____ increases in trade credit and accounts payable 31
_____ other _____ 32
(please explain)

10. During the last twelve months, have you made **major** changes in the nature of your business?

	MAJOR CHANGES MADE			
a. Added new product lines or services		[1] YES	[2] NO	33
b. Dropped product lines or services		[1] YES	[2] NO	34
c. Moved business location		[1] YES	[2] NO	35
d. New branches or added locations		[1] YES	[2] NO	36
e. Changed the name of the business		[1] YES	[2] NO	37
f. Changed your prices relative to your competitors	[1] HIGHER	[2] LOWER	[3] NO CHANGE	38
g. Changed your advertising and promotion	[1] MORE	[2] LESS	[3] NO CHANGE	39
h. Floor space	[1] ADDED	[2] REDUCED	[3] NO CHANGE	40

11. During the past twelve months, did any of the following **hurt** the development and performance of your business? (Please rate each from 1 = "no serious problems" to 5 = "serious problems"):

	No Serious Problems				Serious Problems	
a. A decline in the **market** you serve	1	2	3	4	5	41
b. Competitive pressures	1	2	3	4	5	42
c. Cost or quality of labor	1	2	3	4	5	43
d. Cost or quality of goods, materials, etc.	1	2	3	4	5	44
e. Family demands, health problems, etc.	1	2	3	4	5	45
f. Availability of credit or finance	1	2	3	4	5	46
g. Other _____ (please explain)	1	2	3	4	5	47

12. How is your business doing today compared to the expectations you had for your business a year ago?

	Higher Than Expected	About the Same as Expected	Lower Than Expected	
a. Sales are:	[1]	[2]	[3]	48
b. Profits are:	[1]	[2]	[3]	49
c. My Personal Satisfaction is:	[1]	[2]	[3]	50

13. In what areas have you experienced more or less difficulty **than you had expected** when you became owner or principal manager of your business? (Please rate each):

	Less Difficult Than Expected				More Difficult Than Expected	
a. Developing sales	1	2	3	4	5	51
b. Hiring and managing employees	1	2	3	4	5	52
c. Accounting and record-keeping	1	2	3	4	5	53
d. Getting loans and financing	1	2	3	4	5	54
e. Responding to competitors	1	2	3	4	5	55
f. Keeping costs under control	1	2	3	4	5	56
g. Managing inventories and receivables	1	2	3	4	5	57
h. Planning; developing strategy	1	2	3	4	5	58
i. Dealing with suppliers	1	2	3	4	5	59
j. The cost of government regulation and red tape	1	2	3	4	5	60

14. Think about your **primary** competitor, that firm your customers would go to if or when they do not buy from you. Which of the following would best describe your major competition? (Mark **one** only)

[1] A firm your size or smaller
[2] A firm larger than yours, but less than five times your size
[3] A firm more than five times your size 61
[4] Difficult to say who your major competitor is

15. From the list below, how would you describe your business strategy? Using a **total of 100 points**, please assign points to each item below that reflects its importance in your business strategy. A blank means 0 points. For example, if "low prices" were your major strategy with "better service" receiving secondary emphasis, you might assign 70 points to "low prices" and 30 points to "better service", leaving the rest blank to indicate that they are not receiving **special emphasis** in your strategy. Please read the entire list before scoring.

_____ Try to keep prices lower than my competitors 62-63
_____ Try to provide better service than my competitors 64-65
_____ Provide more product or service choices than my competitors 66-67
_____ Try to build a better reputation for quality 68-69
_____ Try to advertise more effectively 70-71
_____ Try to target customers missed or poorly served by my competitors 72-73
_____ Select a superior location 74-75
_____ Have a better appearance or better facilities 76-77
_____ Provide a service or product otherwise unavailable 78-79

100 points TOTAL

16. What are the odds of **any business like yours** succeeding e.g. 1 chance in ten, 2 chances in ten, etc.?

No chance of success 0 1 2 3 4 5 6 7 8 9 10 Certain chance of success 80-81

17. What are the odds of **your** business succeeding e.g. 1 chance in ten, two chances in ten, etc.?

No chance of success 0 1 2 3 4 5 6 7 8 9 10 Certain chance of success 82-83

18. During the next five years, how much average change **per year** do you expect in the market you are trying to serve: (Circle the appropriate number for each)

	Increase Over 20%	Increase 20% to 11%	Increase 10% to 3%	Unchanged +2% to −2%	Decrease −3% or more	Don't Know	
a. The number of **customers** will:	1	2	3	4	5	6	84
b. The number of **competitors** will:	1	2	3	4	5	6	85
c. The **sales** for **all** firms providing your product or service will:	1	2	3	4	5	6	86

19. What sources of information or assistance have been most important to you in running your business during the last twelve months? Please rate each source below:

	Very Important	Somewhat Important	Little Importance	Not Used	
a. accountant; bookkeeper	1	2	3	4	87
b. friends or relatives	1	2	3	4	88
c. other business owners	1	2	3	4	89
d. government programs or information sources	1	2	3	4	90
e. bankers	1	2	3	4	91
f. trade organizations	1	2	3	4	92
g. lawyers; attorneys	1	2	3	4	93
h. generally available books, manuals, etc.	1	2	3	4	94
i. franchisor or suppliers	1	2	3	4	95
j. courses, seminars, workshops	1	2	3	4	96
k. other _____ (please explain)	1	2	3	4	97

20. What factors do you feel motivate employees the most? Please rate each factor on a scale of 1 = "very important" to 5 = "little importance":

	Very Important				Little Importance	
a. Develop personal, friendly relationships	1	2	3	4	5	1
b. Good wages and salaries; raises	1	2	3	4	5	2
c. Extensive fringe benefits	1	2	3	4	5	3
d. Share in decision-making; more responsibility	1	2	3	4	5	4
e. Close supervision	1	2	3	4	5	5
f. Profit-sharing; stock options, etc.	1	2	3	4	5	6
g. Provide a chance to learn new skills	1	2	3	4	5	7

VALUE PROFILES OF FEMALE ENTREPRENEURS

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VALUE PROFILES OF FEMALE ENTREPRENEURS

ABSTRACT

A sample of 200 female entrepreneurs were surveyed. All respondents were administered a demographic data form and the Rokeach Value Survey. The latter is an instrument used to determine two hierarchies of value importance for each respondent, a terminal value system and an instrumental value system. The results were analyzed to determine the value profiles of the entrepreneurs studied. Research implications and recommendations for further research are included.

INTRODUCTION

Modern interest in the male entrepreneur can be traced back to the early nineteenth century. The discussion and examination of the female entrepreneur, however, is a relatively new phenomenon.

It is estimated that there are now approximately three million female-owned businesses in the United States. The typical female entrepreneur has been described as the first born child, who married, had children and initially worked for someone else. Eventually, she starts a service related business in which her major problems are credit, capital and a lack of business training (12). This description of the female entrepreneur, although perhaps valid, generally lacks utility and/or vigor. The study reported herein is an attempt to overcome these deficiencies.

LITERATURE REVIEW

Literature is replete with descriptions of the personal characteristics considered to be common among entrepreneurs. Research efforts in this area, however, tend to generalize in a subjective manner the personality make-up of entrepreneurs. It is therefore difficult to paint a portrait of an entrepreneur, or small business owner, because of the conflicting results of studies in the field.

Among the more commonly examined characteristics are: need for achievement/risk taking propensity, loci of control and personal values.

Need for Achievement/Risk Taking Propensity. Some of the best known research on examining the personality characteristics of entrepreneurs has been conducted based on David McClelland's theory of need for achievement (2, 14, 16, 17, 22). Schwartz in her research indicated that female entrepreneurs need to achieve. They also desire to be independent and need to experience job satisfaction (20). Many female entrepreneurs have a high self esteem and tend to enjoy attaining success (13, 24).

Many writers assert that risk bearing is a prime characteristic of an entrepreneur (16, 25, 26). Other writers have noted that initiative, innovation, ambitious, aggressive, responsible and numerous other characteristics reflect the entrepreneurial personality (10, 21). More recently, research by Welsh and White extablished eleven characteristics found to be

common among successful entrepreneurs. They note, however, that these characteristics do not predict that a person is, or is not, going to be a successful entrepreneur. They merely suggest that a person having these characteristics has a probability of success in proportion to the degree to which they are present (27).

Loci of Control. Closely related to the concept of risk taking and high need for achievement is the individual's belief in an internal locus of control. According to Rotter's locus-of-control theory, an individual perceives the outcome of an event as being within or beyond their personal control and understanding (19).

Numerous studies have attempted to show the relationship between an individuals lack of control and the degree of success attained by the entrepreneur (3, 4, 15).

Personal Values. Only recently have researchers begun to investigate the relationship of values to entrepreneurship. Gasse looked at certain personal values of entrepreneurs while DeCarlo and Lyons examined the difference in values held be minority female entrepreneurs (6, 8). In both cases the results were inconclusive due to sample size and the instruments used.

It can be seen from the above that a major obstacle that prevents the attribution of characteristics to entrepreneurs is the great diversity of sources from which writers derive the identified characteristics. Many works are innovative, or anecdotal, describing the authors' personal conclusions drawn from samples. On the other hand, empirical studies draw from diverse samples. McClelland's (16) entrepreneurs were in fact business executives representing various functional specialties (5).

There also is difficulty in measuring such characteristics. Welsh and White admit, in assessing an entrepreneur's characteristics, that... "There is no scale applied to the intensity of the entrepreneurial characteristics. There is no thermometer on which to say that at 212° Fahrenheit you are an entrepreneur. Rather, individuals are viewed as having spoonfuls of characteristics." Further... "the characteristics cannot be viewed superficially. Although most of us will observe these characteristics in the outstanding entrepreneur, their existence and extent in any individual cannot be determined by a layperson's examination. To identify the interaction of the characteristics and the extent to which they lie latent at any moment requires an examination in depth by a trained psychologists with experience and knowledge of these characteristics" (27).

In summary, it is difficult to describe the profile of an entrepreneur, regardless of gender, from the attitudinal and behavorial characteristics found in the literature. Recently, Hisrich & Bowen indicated that research on the values of female entrepreneurs was needed to better explain the behavior of these unique individuals (11).

The purpose of this paper is to attempt a more rigorous approach to the description of entrepreneurs, that is, to describe entrepreneurs in terms of their values. Several benefits of such an approach are discussed.

THE MEASUREMENT OF VALUES

The question of how to assess and measure values has received considerable attention. A review of the literature reveals that few, if any, consistently valid and reliable value measuring instruments exist. One of the most popular measuring techniques was the Allport-Vernon-Lindzey Study of Values (1). Two other instruments which have been used in behavioral research are Gordon's Survey of Personal Values (9) and England's Personal Value Questionnaire (7). Currently, the comparatively new and somewhat popular form of measuring values is the Rokeach Value Survey (18). Probably most of the current research being done on values has utilized this particular tool.

The Rokeach Value Survey is the product of many years of research regarding the nature, origins, and consequences of human beliefs, with its final thrust aimed directly at the concept of human values. The survey provides a basis for a systematic value approach to the study of human problems which, in many ways, overcomes deficiencies noted with respect to other value approaches. The Rokeach Value Survey consists of two lists, one of 18 terminal values and the other of 18 instrumental values. The Value Survey requires that each list be ranked in order of importance, with the respondent selecting the one value that is most important to him or her, then the next important value, and so on. Ranking of the two lists of values results in two hierarchies of value importance for each respondent, a terminal value system and an instrumental value system.

METHODOLOGY

The study sample included 200 female entrepreneurs from Florida entrepreneurs whose names were randomly drawn from a list of names of women attending the 1984 National Women's Business Ownership Conference in Orlando, Florida. The data collection package consisted of a cover letter, personal demographic form, Rokeach Value Survey, and a self-addressed, stamped envelope in which to return the data. Eighty two (41 percent) participants returned the survey. The usable value surveys amounted to 74, giving a response rate of 37 percent. The Rokeach Value Survey data was used to provide a tabulation of the research sample medians and rank order composites for terminal and instrumental values, respectively. The rank order of the medians, called by Rokeach the composite rank order, is used not only as a general index of the relative position of a particular value in the total hierarchy of values but also for comparing the position of a particular value across groups. Techniques available through the Statistical Analysis System (23) provided cumulative personal data, as well as terminal and instrumental value profiles.

FINDINGS

Research findings resulted from: (1) a review of the personal demographic data provided by the female entrepreneurs responding to the survey and (2) terminal and instrumental value profiles of the respondents.

In summary, Table A reveals that the majority of the entrepreneurs included in this report were primarily white Protestant females who directed businesses founded and owned by either themselves or their families. Their businesses are relatively small in terms of numbers of people employed. Most of the businesses are incorporated and generate an annual income of $20,000 to $60,000 for their owners. The respondents have been in business for various lengths of time with a little more than

TABLE A

Personal Demographic Information on Female Entrepreneurs

DEMOGRAPHIC VARIABLE	Female Entrepreneurs	
	Number	Percentage
SEX		
MALE	0	0.0
FEMALE	74	100.0
Age		
20-29	4	5.4
30-39	21	28.4
40-49	22	29.7
50-59	19	15.7
60-69	6	8.1
70+	2	2.7
Education		
Some High School	3	4.1
High School Diploma	12	16.2
Some College	34	45.9
College Degree	17	23.0
Postgraduate	8	10.8
Race		
Caucasian	74	100.0
Black	0	0.0
Hispanic	0	0.0
Other	0	0.0
Income		
20,000 - 29,000	16	21.6
30,000 - 39,000	21	28.4
40,000 - 49,000	17	23.0
50,000 - 59,000	8	10.8
60,000 - 69,000	3	4.1
70,000 - 79,000	3	4.1
80,000 - 89,000	1	1.4
90,000	5	6.8
Religion		
Catholic	19	25.7
Episcopalian	4	5.4
Lutheran	1	1.4
Presbyterian	5	6.8
Congregational	3	4.1
Methodist	6	8.1

TABLE A (cont.)

	Number	Percentage
Baptist	12	16.2
Judaism	12	16.2
Other	12	16.2
Entrepreneurial Status		
Self-employed	11	14.9
Owner-manager of Small Business	26	35.1
Owner of Closely-Held Corporation	37	50.0
Company Size (#people employed)		
10	67	90.5
50	5	6.8
100	1	1.4
500	0	0.0
750	1	1.4
1,000	0	0.0
1,000+	0	0.0
Time in Business		
< 5 yrs.	24	32.4
< 10 yrs.	20	27.0
< 15 yrs.	12	16.2
< 20 yrs.	8	10.8
> 20 yrs.	10	13.5
Public Accountability		
Stock Outside Company	7	9.5
Family/Private Ownership	67	90.5
Company Founded by		
You	49	66.2
Family	18	24.3
Other	7	9.5
Company Organization		
Corporate	57	77.0
Partnership	8	10.8
Sole Proprietor	9	12.2
Company Classification		
Service	48	64.9
Retailer	6	8.1
Wholesaler	7	9.5
Construction	9	12.2
Other	4	5.4

one-third of them having been in business over 20 years. Most of the entrepreneurs own companies that are either in the service retailer or wholesaler industries.

As shown in Table B, the entrepreneurs as a group rank health as the most important terminal value, followed closely by self-respect, family secuurity, and freedom. The least important terminal value held by these entrepreneurs is salvation. Two other values ranked at the bottom of the terminal value list were social recognition and national security.

The most important instrumental value, held by these entrepreneurs, as shown in Table C, is honesty. Other closely held values include responsibility, independence, and ambition. The instrumental value which was listed as least important to the entrepreneurs is obedience.

CONCLUSIONS

The female entrepreneurs in this study reported that the terminal value they hold most closely is health. The instrumental value held most closely by these entrepreneurs is honesty. The terminal value of least importance to them is salvation. The least important instrumental value is obedience.

The overall findings provide entrepreneurial value systems of the female entrepreneurs included in this study. Similarities and differences, although not rigorously tested, appear to be evident from those entrepreneurial characteristics found in the literature. More important, the findings may prove useful, if verified, as a counseling tool for prospective female entrepreneurs.

LIMITATIONS OF THE STUDY

Several factors suggest that caution should be used in generalizing the results of this study. The total sample for this study was drawn from a single area (Florida) of the United States. Consequently, it may be measuring the values of female entrepreneurs in a regional area and may not be representative of female entrepreneurs as a group. Further, it is unknown whether or not the value profile would be significantly different if all entrepreneurs who were mailed the survey had returned it. One must wonder how the values of the entrepreneurs who failed to respond compared with the values of those entrepreneurs who did respond.

IMPLICATIONS FOR FURTHER RESEARCH

General acceptance of a set of value profiles for female entrepreneurs could lend itself to comparative research efforts. For example, comparisons between the value profiles of male and female entrepreneurs, as well as male and female managers at different management levels of a large corporation, are possible.

Finally, Rokeach has experimental evidence indicating that when an inconsistency in one's values are pointed out relative to desired behavior, subjects tend to change their rank ordering of pertinent values. In addition, Rokeach has reported that calling attention to such inconsistencies can also induce behavioral changes. Thus, value change research could be conducted relative to the values of female business school students who express a desire for the entrepreneurial life.

TABLE B

Terminal Value Medians and Composite Rank Orders for Female Entrepreneurs

VALUE	RESEARCH SAMPLE--ALL ENTREPRENEURS	
	N = 74	
	Median	Composite
A Comfortable Life	9.5	(9)
An Exciting Life	11.5	(12)
A Sense of Accomplishment	7.0	(5)
A World at Peace	11.0	(11)
A World of Beauty	13.0	(14)
Equality	13.0	(13)
Family Security	5.0	(3)
Freedom	5.0	(4)
Health	4.0	(1)
Inner Harmony	8.0	(7)
Mature Love	10.5	(10)
National Security	14.0	(16)
Pleasure	13.0	(15)
Salvation	17.0	(18)
Self-Respect	5.0	(2)
Social Recognition	14.0	(17)
True Friendship	8.5	(8)
Wisdom	8.0	(6)

Note. Figures shown without parentheses are median rankings and, in parentheses, composite rank orders.

TABLE C

Instrumental Value Medians and Composite Rank Orders for Female Entrepreneurs

VALUE	RESEARCH SAMPLE--ALL ENTREPRENEURS	
N = 74	Median	Composite
Ambitious	6.0	(4)
Broadminded	8.0	(6)
Capable	8.0	(5)
Clean	13.0	(16)
Courageous	10.0	(9)
Forgiving	12.0	(14)
Helpful	12.0	(15)
Honest	2.5	(1)
Imaginative	11.0	(13)
Independent	6.0	(3)
Intellectual	8.0	(8)
Logical	11.0	(12)
Loving	10.0	(10)
Loyal	8.0	(6)
Obedient	17.0	(18)
Polite	13.0	(17)
Responsible	5.0	(2)
Self-Controlled	11.0	(11)

Note. Figures shown without parentheses are median rankings and, in parentheses, composite rank orders.

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BUSINESS INTELLIGENCE TECHNIQUES FOR THE ENTREPRENEURIAL FIRM

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ABSTRACT

This article suggests that a new managerial tool for competitive strategy - business intelligence system - may be just the right thing for smaller entrepreneurial firms. While this new approach to finding out about crucial developments in the competitive area originated within Corporate America, it represents a cost-saving, simple and effective managerial tool for entrepreneurs as well. The adoption of some of the newest techniques, such as the Reverse Competitive Analysis Technique (RCAT) should prove very useful for the entrepreneurial firm.

INTRODUCTION

Many stories of successful entrepreneurial ventures involve an alert entrepreneur who discovered a market opportunity: a niche in the market not yet served by the incumbert big corporations. The continuing exploitation of the opportunity, however, depends, to a large extent, on the ability of the entrepreneurial firm to survive the inevitable competition. This can be achieved in two ways: 1) By creating the perception among the competitors that encroaching upon the niche occupied by the smaller/newer firm will not be profitable, or 2) By continuously innovating, thus keeping a gap between the entrepreneirual firm and its slower, big corporate, competitors.

Both ways involve the crucial factor of perception. The first hinges on the competition's perception of the entrepreneur's potential, intentions, capabilities and strategy. In other words, the assessment of their own competitive position vis a vis the entrepreneurial firm, will determine, to a large extent, the competitors' willingness and strategy of fighting the newcomer.

The second survival strategy, innovation, involves the perception by the entrepreneur: perception of the environment, its opportunities, threats, competitors' response to new product introuctions, and upcoming competitive developments (including technology, regulatory, social, etc.).

In short, perception of the competitive arena is a critical factor in the entrepreneur's success. Both accurate perception (e.g. by the entrepreneur) and misperception (e.g. by the established competitors) can combine to create and explain many entrepreneurial success stories (as well as failures).

How is the perception of the competitive arena developed? The answer is business intelligence (BI) - the activity of monitoring the external environment. To most business people, business intelligence is paramount to monitoring competitors. Yet this is a somewhat narrow view of the scope of the activity. Thus, one company in a high-tech industry (bioengineering) had its prime intelligence concern the technological environment. The company targeted a particular segment of the scientific community for a close monitoring. To another company, one dealing chiefly with government agencies (a defense contractor), the most pressing intelligence targets were the particular government employees in charge of the relevant programs the company was bidding on. Another company in the communication industry was closely following regulatory developments for about a year, looking for a window of opportunity for a particular idea. In short, BI is more than just <u>competitors'</u> watch.

Another misperception of BI involves its confusion with industrial espoinage. BI is the legal and ethical techniques for monitoring the competitive arena. Industrial espoinage is the use of illegal/unethical techniques for obtaining competitive intelligence. While the distinction between a ligitimate BI activity and an act of industrial espoinage falls sometimes into a grey area, most American businesspeople know the difference quite instinctively. As a matter of fact, one executive we talked to voiced the opinion that American managers are the

most ethical of all managers, especially in comparison with their South-American, but even their European counterparts.

A recent development in the area of BI is the BI system (BIS). The BIS is a set of procedures for the collection, evaluation, storage, analysis and dissemination of intelligence. Establishing a BIS requires the assignment of particular responsibilities and the establishment of a "center" of accountability in the area of BI as well as rewriting of job descriptions and rethinking of the corporate culture. Most important, the BIS represents the institutionalization of BI activities. As such, it is not less than a revolution in management thinking, a revolution which according to a recent article in the NY Times (Oct. 28, 1985, Page D1)spreads like fire among Corporate America. Can the small entrepreneurial firm learn anything from this managerial revolution.

BI IN THE ENTREPRENEURIAL FIRM

The answer is: definitely yes! Most entrepreneurs are very well aware of the importance of BI activities in the operation of their firms. Yet few have realized the benefits of formalizing the activity via a BIS. Those few we have met swear by the effectiveness of the formal and explicit function. The majority, however, still considers a formal BI activity to be the commissioning of costly market research studies (which many enjoy ignoring later) and no more. Yet the new approach to BI offers the entrepreneur a wealth of new (and inexpensive) technologies which can substantially improve the BI capability of his/her firm.

Most entrepreneurs are very active in the pursuit of BI in their daily routine. What they do not realize, though, is that their individual efforts are insufficient to keep tab on the outside world. The new BIS approach corrects this situaiton by distributing BI responisbilities across the entire firm, thus augmenting the entrepreneur's own information-gathering role.

The BIS can be structured in several ways, according to its intended scope and purpose. The basic approaches to BIS are:

a) Dynamic data/static questions

In this system an inflow of data is monitored for answers to predetermined questions such as: What are company X's plans in the area of Y products? What is the cost of production of company Z? etc. As the data arrive at the BI "center", they are matched against the questions for possible answers.

b) Static data/dynamic questions

This method underlies the use of a library. The static data are not exaclty static as a library's collection is constantly supplemented with new material. The difference with (a) above is, however, that the incoming data are not monitored continuously but periodically at times of need. The person in need of answers to some questions then searches the accumulated data.

c) Dyanamic data/dynamic questions

This is the principle underlying the intelligence "project" - a familiar undertaking in most companies. In response to concerns which are often changing, the executive in charge will begin a monitoring program of incoming data as well as activate contacts and pursue an active search of accumulated as well as new data.

The BIS can be formed to respond to all three methods. The creation of an effective storage system, the establishment of a monitoring network (see later for more details) and the assignment of active BI responsibilities to particular personnel are specific elements of a BIS designed to meet these various approaches to collecting intelligence.

The type of intelligence collected by a BIS can be divided into two classes: defensive or offensive intelligence. The first and more common type involves a system that is geared to flag management of adverse competitive developments. The second type searches the environment for opportunities. An example of the latter type is a BI unit which alerted management to the fact that a competitor was laying off particular type of R&D personnel during a recent recession. Management then concluded that the competition

is abandoning a particular line of research, and in line with its strategy of focusing, concentrated its efforts in the affected area and built a powerful competitive position there.

Defensive intelligence may require a different communication procedure than offensive intelligence, as well as a different orientation of the personnel involved in the monitoring activities. In small companies offensive targeting may be more appropriate than in the established, big corporation where defensive strategy is the overall strategy.

THE BIS

The basic design principle of a generic BIS are depicted in Figures 1 to 4. Figure 1 lists the 5 tasks of a BIS, from collection of data to the final dissemination of intelligence. The difference between the input (data) and the final output (intelligence) is that the final product is in a form which is useful for the purpose of decision-making. The transformation of raw data into decision-backing material takes place through the stages of evaluation and analysis. Evaluation sifts through data, discarding the irrelevant, outdated, unreliable, leaving the pieces which are timely and appear to be valid. These pieces of information are then pieced together to a competitive puzzle, according to the principles of competitive analysis. The analyzed information is then disseminated to the decision makers who will actually use it to make decisions and determine strategy in areas such as product development and introduction, acquisitions, market entry, pricing and promotion policies, and so on. The total journey of a piece of raw data (e.g.: "Company X just shifted executive Z to a new position") is depicted in table 2. The journey ends when the data become intelligence (e.g.: "Company X may be strengthening its committment in area Y") through its fit into a whole puzzle of other pertinent data.

This process of conversion results in a marked decrease in the amount of "information flood" reaching executives' desks. This is depicted in Table 3, in which the 5 stages are matched with the principal BI "tool" (or procedure) used in that stage.

The process of producing intelligence is carried through a cylce which is diagrammed in Table 4. The box labeled Business Intelligence Unit (BIU) does not necessarily represent a whole floor of executives, assistants, analysts and secretaries. For a small firm, the BIU simply means that someone will be put in charge of coordinating the BI efforts across the organization. The main tasks of collection, evaluation/analysis and storage will be distributed among various individuals in the firm and someone has to be responsible for the continuous and systematic activity of gathering intelligence. In one very successful firm which became the number 2 in its market in 5 years, the president took pride in being the Chief Intelligence Officer. His main intelligence-gathering aparatus was the Internal Collection Network (ICN). The ICN is the most effective way for collecting field intelligence. It is composed of various individuals in the organization who come in frequent contact with the outside world. These individuals are then instructed about the intelligence needs of management, communication procedures, (a relatively simple task in a small entrepreneurial firms) and other BI related matters. An example of internal collectors' access to sources of data is given in Table 5, in which collectors are classified by their functional affiliation. An example of the type of a written report these collectors are instructed to fill (for purpose of storage, proper dissemination and effective future retrieval) is given in Table 6. The report is adapted from an actual BIS operating at a small division of a large chemical manufacturer.

BI TECHNIQUES FOR THE ENTREPRENEURIAL FIRM

Several BI techniques were developed recently in conjunction with the establishement of a BIS in Fortune 500 companies. These techniques can easily be adapted for use by entrepreneurs in smaller firms. They are not costly (though they may require the hiring of outside experts) and the results are spectacular. Among these techniques are 1) the Ingelligence Audit and 2) the Reverse Competitive Analysis Technique (RCAT).

The Intelligence Audit (IA) is a diagnostic tool aimed at assessing BI resources available within the firm. Since the new approach to the BI activity treats BI as an organizational resource, it is desirable to assess the firm's capabilities in the area before a BIS is established. The IA is composed of a set of interviews with key decision makers as well as "gate-keepers" - those individuals in the company who through their position come in contact with a wealth of information (but who usually hold it for themselves). Through the interviews the audit determines:

1) What intelligence is acually needed by users
2) What intelligence is already collected within the firm
3) Who can serve as collectors of intelligence
4) What communication channels are best for intelligence reporting
5) What bottlenecks restrict the flow of intelligence.

The mapping of intelligence flows and accumulations in the firm gives the entrepreneur a rational way to plan the system procedures, establish the most effective ICN and bypass human problems in making sure hot intelligence is gathered and communicated on time. It also reveals that surprising wealth of data already exist in the firm from both published sources and field contacts of various employees. These BI capabilities typically go unused unless they are harnessed through a BI system.

The RCAT is a very new device used by few innovative corporations to find out what competitors know about the firm. Using the usual BI techniques for collecting and analyzing data on competitors, the RCAT turns the process on its head and collects intelligence on the firm itself. It reveals to top management (of which only the BI director and the president know about the project) what competitors can gather about the firm by looking at published data as well as collecting intelligence from field sources (including the firm's own employees). The RCAT results are an eye-opening experience to management as far as realizing how much information is available to competitors, and the possibility of putting together an accurate (and at time embarrassingly accurate) picture of the firm's strategic plans. Obviously, an RCAT enables the firm to pinpoint information "leaks" and to take steps to stem the outflow

of intelligence. This is, however, only one, and not necessarily the most important, benefit of an RCAT.

As discussed earlier, a critical factor in the success (and failure) of entrepreneurial ventures is the perception of the firm by its own competitors. Creating and conveying the right message is crucial in maintaining and defending a profit opportunity. The RCAT enables the firm to determine how it is perceived by the outside world - especially competitors but also industry experts, government officials, suppliers, etc. Finding out in which areas the company is considered strong and in which it is considered weak helps the entrepreneur to chart his/her grand strategy. Sometimes a company may find out that the competition is not "buying" its message, while other times a company's efforts in a particular area is judged as determined and effective, and the competition in essence has given up on winning in this arena. Just as the perception of the firm by its clients is a very important piece of information, and indeed is actively pursued by the marketing (and market research) department, the perception of the firm by its competitors and other outsiders should be of paramount concern in the formation of competitive strategy.

Finally, a by-product of the RCAT which is useful to an effective BI effort is the identification of useful sources. The RCAT uses a whole list of sources, both published and human. Unlike a regular competitive analysis (or industry study), in which the accuracy of the sources is difficult to ascertain, an RCAT is a "controlled study" in which the control is the executive's knowledge of their own firm. Thus it is possible to determine, with 100% confidence, which source was reliable and how much so. This is an invaluable information for the purpose of establishing a BIS. The most reliable sources can then be used to gather intelligence on the outside world.

Finally, a note about cost. For many entrepreneurs the perception of a formal BIS is as a costly luxury which can be afforded by big corporations only. The fact is that the BIS represents a revolution in managing business intelligence, which turns the entire organization into a BI newtork. The effect of harnessing internal resources, instead of buying outside services, is to reduce the cost of monitoring the environment. Smaller firms and entrepreneurial ventures may therefore finally find it feasible to use one of the newest managerial - competitive tools which until now was reserved for their bigger rivals.

A LOOK AT THE RATIONALITY OF THE DECISION TO EXPORT BY HIGH TECHNOLOGY EXPORTERS AND NON EXPORTERS

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ABSTRACT

High technology exporters (HTE) and non-exporters (HTN) are examined to determine if a rational, economic case can be made for not exporting by the HTN group. The data suggest that most of the decision factors are non existant or controllable. This means the decision not to export is not based on rational cost, risk or control based decision factors and significant export potential exists for the HTN group.

INTRODUCTION

American firms and government agencies recognize the role of trade in developing market opportunities and promoting growth. An increasing number of challenges to high technology firms in domestic markets have arisen from Asian, European and developing country exporters to the United States. Development of domestic and world markets points to a need for a greater international orientation.

Small firms have traditionally played a minor role in the international marketplace. Numerous sources suggest that the top 200 U.S. exporting firms account for 80 percent of all exports. Small high technology firms have been seen as a major growth source in the remaining 20 percent. The current study finds that a majority of these firms still do not export and see major barriers to entering the international arena. At an earlier Creativity Symposium the high technology firms that exported were shown to differ significantly from low technology exporters and the high technology group was shown to be smaller, growth oriented firms which relied on exports for 10% of annual sales.

The U.S. Department of Commerce and numerous other government and private organizations have attempted to promote exports in small high technology firms. How successful these programs will be are in large part determined by the key decision factors used by entreprenuers in making the committment to exports.

This paper examines the differences in these decision factors between the high technology exporters (HTE) and non-exporters (HTN) responding to this study. Key issues to consider include:

*How are the HTR and HTN different?

*What factors influenced the export decision?

*How rational is the decision not to export?

*Can assistance/information efforts increase exports?

METHODOLOGY

The firms discussed in the report are from a sub-sample of 285 high technology respondents to a larger study of over 2200 firms. In this report HTE are 109 of the respondents and HTN are 176 of the respondents. For a complete discussion of the sampling procedures and comparisons to national small business data readers are referred to the 1985 Proceedings of the Creativity, Innovation and Entreprenuership Symposium.

KEY DEMOGRAPHIC FACTORS

Organizational and demographic factors are an influence on the export decision for the high technology firms in the study. Table 1 shows the differences between the HTE and HTN groups.

Size is one of the factors that is required for the critical mass concept to be successful in exporting. The logic is that small firms do not have the staff or breadth of expertise to export. This study shows that more HTE firms are in the over 20 employee group than the HTN group, but 43.1 percent of the HTE group are in the less than 20 catagory.

Utilization of plant capacity is also greater for the HTE group. The additional 5-10 percent of annual sales attributed to exports could be the explanation for the differences. The HTN group was in the 60-69 percent utilization range while the HTE firms were approaching the 80 percent area.

HTE firms also had higher gross reciepts than the HTN group. The HTN group were characterized by sales of less than $500,000 and the HTE approached $1.5 million in sales. The difference is a resource limitation on the amount of funds available for export development, but use of third party sources is an alternative that the HTN can consider.

The current market area is also more limited for the HTN group. The HTE firms are most likely to consider a greater

TABLE 1
DIFFERENCES BETWEEN HIGH TECHNOLOGY EXPORTERS AND NON-EXPORTERS

Number of Employees	HTE>$\bar{x}$	.000
Number of Years Ownership		NS
Utilization of Plant Capacity	HTE>%	.087
Gross Receipts	HTE>$\bar{x}$	.000
Five Year Sales Trend		NS
Market Area	HTE>Distance	.000
Service Requirement	HTE>%	.029
Top Management Team		
Size	HTE>$\bar{x}$	.000
Lived Outside U.S.	HTE>$\bar{x}$	.003
Extensive Travel	HTE>$\bar{x}$	.000
Language Skill	HTE>$\bar{x}$	.045

distance for sales than the HIN group. Most of the sales of the HIN are within 250 miles, the HIE over 1000 miles! This distance factor has been reported as a psychological barrier in several other studies because of its impact on service, credit and delivery issues. If a firm is comfortable with sales to distant domestic customers, exports are not perceived to be a difficult next step in market development. This area is also linked to the area of after sales service. Somewhat surprisingly the HIE firms principal products required more after sales service than the HIN group. The HIE firms with service concerns were more likely to use third party sources to cope with the potential problem.

The other area which has been reported as critical to success in the international arena is the top management team and their international orientation. This study shows that the HIE firms have more international experiances than the HIN group. The size of the top management team is double (3.6 to 1.7) for the exporters. This difference in size is an understandable reason for limiting sales to domestic markets. Only about 34 percent of the HIN group have an executive who has lived outside the U.S., while nearly 53 percent of the HIE firms had such a person. Travel was also considered as a measure of exposure and shows that the HIN and HIE groups exhibited about the same differences as above. The data still shows that one third of the non exporters have exposure they could utilize. Competency in one or more foreign languages is reported by 29 percent of the HIE, but this means that 71 percent did not have anyone with language skill and they still felt they were successful in the export process.

FACTORS INFLUENCING THE DECISION NOT TO EXPORT

The export process is not seen as an imperative by small firms in the U.S. as it is in other economies and this results in a number of reasons firms do not export. The exporting group was influenced by factors that could change the opinions of the non exporters in this study. Two such factors are the receipt of an unsolicited order and the time spent on investigating the firm's export potential. HIE firms were strongly influenced by an order. Nearly 57 percent of the HIE group had an order for the first sale! HIN firms may be smaller and less visible to potential customers, but need to know how to respond to inquires. No response, unless based on an informed decision, is a potential loss of business. An overly enthusiastic response, without following proper procedures, could be even worse for the non exporters.

The time a firm spends investigating the export process prior to making a decision will have an impact on the success of the effort. Table 2 shows a comparison of the amount of time committed to the search process by the two groups.

The HIE group did not spend as much time on the investigation as the HIN group, which is partially explained by the high percentage of firms with an unsolicited order to begin exporting.

TABLE 2
TIME COMMITTED TO INVESTIGATING EXPORT POTENTIAL

GROUP	HOURS COMMITTED				
	<10	11-20	21-40	41-100	Over 100
HTE	56.0%	9.9%	8.1%	12.1%	13.2%
HTN	28.9%	15.6%	20.0%	20.0%	15.6%

There is still a real question about how a strategic decision of this magnitude can be evaluated in so little time. Most firms spend more time selecting a long distance service or a copier than indicated was spent on the export decision. Time spent and the interest it implies as seen in Table 2 is a factor which will have to be considered to determine the "rationality" of the export decision.

Table 3 reports the percentage of non-exporters reporting that the listed factors were important in their decision not to export. These factors were ones which influenced the decision , but are different for firms with exporting experience. For example, a majority of HTE firms (52%) were competitor driven to export while 50.5 percent of the HTN group are "satisfied with current sales" and are apparently not aware of the same level of competition. Both groups agree that red tape and finding customers are causes of concern, but the HTE group have attempted to cope rather than avoid the process. Table 3 will also be used to look at the rationality of the export decision.

TABLE 3
FACTORS INFLUENCING NON EXPORT DECISION

Too Complicated	79.6%
Red Tape	74.3%
Finding Customers	72.2%
To Risky	65.4%
Not Big Enough	65.3%
Do Not Understand Exporting	63.6%
Product Not Exportable	50.6%
Satisfied with Sales	50.5%
Service Requirements	49.0%
Non-Competative	47.6%
Not Enough Profit	43.0%

RATIONALITY OF THE DECISION NOT TO EXPORT

The primary focus in this section is on the HIN firms and whether efforts to create more exporters in the group will succeed or whether the non export decision was a rational response to existing conditions. The concern arises because high technology firms are perceived to have the greatest export potential in the manufacturing sector. Responses of the HIE firms previously reported at the Symposium indicate plans to increase exports and that exports have contributed to growth and profits. Furthermore, profit expectations have been met. The perceived difficulties of the HIN group may be more fantasy than fact for the high technology sector.

One way to determine whether the non exporters should reconsider their decisions is found in the demographic information.

Demographic Factors

Size of the firms was shown to differ for the HIE and HIN groups. Closer examination shows that 110 (62.5%) of the HIN firms meet the exporter profile for number of employees. This finding suggests that if a critical mass was the only factor in the decision that this segment may want to reconsider or they would not be acting "rational" in the decision process. Also, 75 (43%) of the HIN firms meet the gross receipts profile of the HIE firms. This suggests that they have adequate financial resources available. Why the negative export decision?

For the services question, no or little service requirements were reported by 102 (58%) of the HIN group. They would appear to be candidates to reconsider as well. If the same percentage of HIE firms with extensive service was added to the HIN group, 159 (92%) of the HIN firms would be export candidates.

The international orientation of the HIE firms was a significant factor in differences with the HIN group, but a review of the distribution shows that 148 (84%) of the HIN group could meet the profile of the exporters on at least one of the three factors which indicates some international exposure.

This review of the key demographic and organizational factors suggests that a majority of the HIN firms are candidates for exporting.

Attitudinal Factors

If the demographic factors are not enough to suggest export reconsideration, why the resistance? Statistics and success stories are not sufficient to convince people to re-think a decision of this magnitude. We must address the perceived barriers to the process.

Table 3 presents the key concerns of the HTN group. The decision would be rational if a majority of these factors were uncontrollable or could not be profitably solved. This does not appear to be the case, however.

The first group of factors are common concerns and would be valid reasons not to export, except that the HTE firms have solved them and can control their impact on the firm. To ignore opportunities if the situation is controllable is hardly innovative or entreprenuerial and is less than rational. For example only 10.3 percent of the HTE firms said it was too complicated

The second group of factors are also controllable except for size. The risk can be reduced dramatically and in some cases can be less than in domestic transactions. The lack of understanding is a function of commiting the time to select the appropriate entry method. Some firms may not be large enough or have the resources to export and for these firms the decision is a rational one. For the others, they may need to begin looking over their shoulders!

The remaining group of factors were important to 50 percent or less of the respondents and suggests that the other 50 to 60 percent who did not consider them important only need information and someone to reduce their uncertainty and they could be export candidates. If the product is not exportable (How do they know?), the HTN respondents are rational, but if it is exportable, perhaps they should search for someone with more interest in profits to develop that segment of the market. One of the most disturbing responses was the satisfaction with current sales. Is an entreprenuer ever satisfied? Service is not seen as a major issue by the HTE group because they can use contracts, third parties and distributors to meet this need. Why would HTN firms ignore sales potential when the same options are available? The non-competative response says that 52 percent of the HTN firms feel competative but do not exploit the opportunity. WHY? Finally, if exports are not profitable, or do not appear they will be profitable, the HTN firms should stay home. Table 4 suggests this may not be the case for HTE firms however. The table shows only a small percentage of the HTE firms are not currently contributing to the firm's profitability. Also, a majority of the HTE firms have met their profit expectations and feel profits are equal or greater than those from domestic operations.

The results cited in this section suggest that entreprenuerial decisions are not being exhibited by the HTN group and that information and assistance could result in a more "rational" and informed decision making process. How many of these firms can export is still open to question, but it appears a majority of them could reconsider their role in the international marketplace.

TABLE 4
PROFIT POTENTIAL OF EXPORTS

Factor	Strongly Agree/ Agree	Stongly Disagree/ Disagree
Contribution to profit	69.5%	7.4%
Met profit expectations	56.4%	12.7%
Sales are more profitable	17.6%	43.3%

In summary, the decision to export may be rational if:

* No assistance sources exist in the area
* No third party representation is available
* U.S. growth is more profitable
* Firm is to small
* Product is not exportable, requires service

The decision is "irrational" if :

* Competitors are doing it
* Unsolicited inquires arrive
* Exports contribute to growth and profits
* Assistance sources are available
* Risks can be reduced (Insurance,L/C)
* Third parties can be used (EMC, ETC)

REDUCING BARRIERS TO EXPORT DEVELOPMENT

The HTE group shows that the appropriate product mix can lead to exports which produce profits and growth. The self interest of the HTN group should be sufficient to generate greater interest in exports. Th fact that the firms spent little time on the decision and have negative attitudes about the process suggests that greater efforts will be needed to convert the HTN to the HTE group.

Information directed to the HTN group concerns would be most effective. The complications seen by the HTN group can be minimized if direct, personal, "hand holding" types of assistance can be developed. Readers are encouraged to check with the Department of Commerce, the Small Business Administration, the Export- Import Bank, local trade associations, and university based trade assistance programs. Many of the services are free or offered at low costs to encourage the process.

The paper shows that many of the difficulties can be overcome and new market opportunities are available for the entrepreneur with a will and a competative product.

Climate to Promote Entrepreneurship or Intrapreneurship

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The number of articles, books and symposia written on the Entrepreneur makes one wonder about the wisdom of furnishing yet another in the mass and mess of advice, folklore, quasi-research studies and articles. The program in this third iteration of the Creativity, Innovation and Entrepreneurship Symposium is as impressive as any in the past. An array of "real" experts, practitioners, commentators and distinguished scholars are all commenting on the entrepreneur. Lipper, Leonard and McClelland sounds like a law firm, but they are as much a description of the what, the who and the why of economic entrepreneurial growth.

The issue is whether one can add to the commentary, the research and the practice that these three represent. It is difficult to disagree with Lipper's views on vision and the focused energy; on Leonard's admonition to not walk from negative people but to run; or McClelland's insistence on the achievement motive that can be developed, kindled and nurtured. All of these in one sense point to what is needed to fertilize the entrepreneurial or intrapreneurial spirit.

I will limit myself to discussing the organizational climates that can be purposely constructed to foster the creative, highly motivated person that we typically call the entrepreneur. There is substantial evidence that economic policies of countries can block as well as encourage innovation and creative enterprise. The recent interest in the Hungarian Economic Reform policies is evidence that large-scale, centrally-planned policies can develop a mind set and moderate risk-taking behavior essential for economic and entrepreneurial development.[1]

The intent of this paper is not to rebuild a macro-economy, but to look at those elements that appear compatible to developing a motivated, risk-taking, experimental, questioning group whose performance would eventually lead to innovative entrepreneurial activity.

Many people have written directly about organizational climate and the effect on morale, productivity, creativity and industrial survival.[2&3]

It is clear that organizational climate--the mix of mythologies, policies, traditions, interpersonal expectations and expected behaviors--leads to an atmosphere that is subtle but strong in its ability to reinforce certain behaviors, whether they are supportive of risk-taking behavior or destructive of individual initiative.[4]

When attempting to develop the setting for innovation, creativity and entre- (intra-) preneurship, there are some aspects to keep clearly in mind. The characteristic pattern of behavior for creative, innovative people has been only partially documented, but we do know that these people are or possess most of the following characteristics:

1. A need for achievement, that is, a strong drive to do something, to receive concrete feedback, to take moderate risks, to be responsible for outcomes.[5]

2. A healthy disrespect for conventional wisdom. These active people believe that there is a better way to do something, and either ignore what others say or set out to prove the current way to do things is not the only (and not the best) way.[6]

3. They seem to be mildly sociopathic in that, although they understand the rules and understand the logic of situations, they are willing to ignore or go contrary to these rules when it suits.[6]

4. They do not like puzzles and are willing to accept that from a "messy" world they can create some order and solve problems.[6]

These are only a few of the characteristics that argue for a leadership style which is both flexible and demanding, supportive and driving, informal and time-sensitive, budget-conscious and solution-oriented. It is an axiom of organizational theory that the leader of the gang sets the climate. The leadership style will allow and be influenced by a climate that has, I believe, the following six characteristics. The opposite of a <u>supportive</u> climate will be presented also, however, since the focus is on "good" climates, it will not be discussed.

The two climates are:[4]

Defensive	Supportive
1. Evaluative Feedback	1. Descriptive Feedback
2. Political Orientation	2. Solution Orientation
3. Procedure Driven	3. Vision Driven
4. Neutral	4. Empathic
5. Superiority	5. Collegiality
6. Certainty	6. Experimental

The climate for innovation and entre- (intra-) preneurial activity will be based on:

1. Descriptive Feedback-that is, feedback that describes rather than evaluates behavior, is based on the leader's observations rather than inferences, is intended to be helpful versus critical. This feedback also is clearly related to expectations for performance.

2. Solution Orientation-the focus of the unit, division or organization is on the possibility of success; it focuses constantly on the optimistic viewpoint of "can do"; is relatively unconcerned about whose favorite idea will be harmed and is relatively unconcerned about the win-lose dynamics of turf protection. This is clearly an orientation that suggests that "we" can solve puzzles and do it better.

3. Vision Driven-the focus is always on the future, there is little patience with the past (whether success or failure); has a healthy respect for fantasies of the future and scant regard for the policies and procedures of the past and present.

4. Empathic Environment-this is a highly affectionate, clearly feeling atmosphere where people care about the hopes and fears, successes and failures, needs and wishes of each other. Expressed or not, it is clear that people in this atmosphere accept the basic humanness of each other.

5. Collegiality-the sharing, informal, yet, demanding interaction of people in this aspect is most notable in the time and effort spent in encouraging a joint commitment to professional and technical excellence. It is more than "People support what they help to create", in that all personnel expect involvement, demand involvement and support each other to work to their highest level of ability.

6. Experimental Atmosphere-there is a constant sense in this climate of tinkering or posing "What would happen if . . .?" questions. There is little fear of failure but a willingness to change if only for the sake of change. There is a constant drive to do it better, do it differently, do it well.

The above characteristics will not guarantee a climate of creativity or entre- (intra-) preneurship, but will go a long way to creating the bubbling, enthusiastic atmosphere that generates ideas and energy. This climate will also allow the informal collegial demands that can push the achievement motive and stimulate the healthy competitive urge to be better than oneself. The atmosphere builds a creative reliance and tension that constantly provides fertile ground to experiment, create and innovate.

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An Expert Support System for Compensation Decisions

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How do we decide on a fair compensation for highly talented people that can make the difference between success and failure? There are many criteria or factors to consider, each of which are of different importance. An individual may excel with respect to some of these factors, but be deficient in others. In order to arrive at a "fair" compensation we must be able to do the following:

STEP 1: evaluate the relative importance of each of these factors

STEP 2: for each factor, evaluate the talents of the individual, relative to others in the field

STEP 3: synthesize the results of STEPS 1 and 2 to arrive at a measure of worth each individual

STEP 4: translate this relative worth into a compensation commensurate with the compensation of other talented people.

The implementation of such an approach was, until recently, far from practical. This is manifested in the difficulty of performing steps a,b, and c above. For one thing, how does one evaluate the relative importance of factors when some, if not most, are subjective? Secondly, what scale does one use to measure the value or talents of individuals for such subjective factors as creativity? Third, even if one could measure an individuals value relative to each of the factors, how does one combine the results when each factor is in effect a different dimension?

Fortunately, a relative new process known as The Analytic Hierarchy Process (AHP), enables us to accomplish steps a, b, and c. Having done so, we can easily accomplish step d) and arrive at a reasonable and objective evaluation of an individuals worth, as will be illustrated below.

THE ANALYTIC HIERARCHY PROCESS

The Analytic Hierarchy Process (AHP), developed by Professor Thomas Saaty at The Wharton School of Business, enables decision makers to structure a complex problem in the form of a hierarchy. Both objective as well as subjective factors can be accommodated. Each factor and alternative can be identified and evaluated with respect to other related factors. The ability to structure a complex problem and then focus attention on individual components amplifies one's decision making capabilities. The capacity for making judgments is expanded beyond the limits imposed by what psychologists call the limited channel capacity and short term memory of the human mind.

Expert judgments are solicited from the decision maker about each facet of the decision problem. The methodology goes beyond conventional decision analysis techniques by not requiring numerical guesses. Relative judgments are used, rather than absolute judgments. Not only do relative judgments provide a more accurate representation of the decision makers thoughts, but relative judgments can easily accommodate subjectivity when appropriate.

When using Expert Choice, (Forman, et al., 1983) an IBM PC implementation of AHP, judgments can be made entirely in a verbal mode; no numerical guesses are required. After a decision maker conveys his or her expert judgments relative to each of the many facets of the decision being contemplated, the results are synthesized or combined. In addition to developing overall priorities, Expert Choice will display each of the components that contribute to the overall priorities. This enables the decision maker to assess the results, implementing them if they are appropriate, or refining the model to reflect additional insights.

ASSUMPTIONS

In order to illustrate how to arrive at a a fair compensation for a highly talented person, we will consider a hypothetical example of a college quarterback who is about to enter the professional ranks as one of the most sought after players in recent memory. In estimating the compensation that the "rookie" with super star promise is entitled to, we will evaluate his worth to the franchise by comparing him to two established players. The first is an old pro, most likely in his last season. The second is a player in the prime of his career.

We will make judgments about the relative importance of various factors to the franchise, and then make judgments about how much each of the players contribute with respect to each factor. All judgments will be made in a pairwise comparison fashion.

A synthesis across the factors will produce overall priorities. These priorities will then be used calculate a "fair" level of compensation for the rookie when compared to the salaries of the established players.

CRITERIA AND SUBCRITERIA

The criteria and subsubcriteria are show in Figure 1. The relative importance of each of the criteria and subcriteria are derived from a series of pairwise comparisons. As an example, we will illustrate how the relative importance of the criteria are derived.

Figure 2 shows how a judgment is made using the verbal comparison mode of the Expert Choice software. Judgments are made about each pair of criteria. For example, the judgment in Figure 2 indicates that past performance is moderately more important than skills.

The judgments for all pairs can be seen in the matrix at the top of Figure 3 where numbers are used to represent the intensities (e.g. 3.0 for MODERATE). Each number in the matrix represents a judgment between the criterion in the row with the criterion in the column. If the intensity of judgment is not enclosed in parentheses, the judgment is that the row element is more important than the column element. Intensities that are enclosed in parentheses indicate that the column element is more important than the row element. For example, the (3.0) in the SKILLS row and the PAST PERFORMANCE column signifies that the judgment was made that past performance is MODERATELY more important skills. The next entry of 3.0 indicates that SKILLS is judged to be moderately more important than mental traits.

This set of judgments contains redundancy in that it would be possible to algebraically solve for relative priorities using just the judgments in the top row of the matrix. However, it would be dangerous to do so since the translation from words to numbers is a tricky business as different people might have quite different interpretations of MODERATE or STRONG. Using the entire set of judgments, (including "redundant" judgments), to calculate priorities results in priorities that are relatively independent of differences in individual interpretations of the words. That is, if two individuals had about the same perceptions, but one tended to express them using more extreme judgments than the other, the resultant priorities would nevertheless tend to be about the same. In a sense, by using redundant judgments the computer can "learn" what an individual means by MODERATE, or STRONG. (1)

Redundant judgments are used in AHP for other reasons as well. Since any judgment is likely to contain some "experimental" error, calculating priorities using redundant judgments will result in increased accuracy. Furthermore, a measure of the inconsistency of judgments can be derived. If the inconsistency

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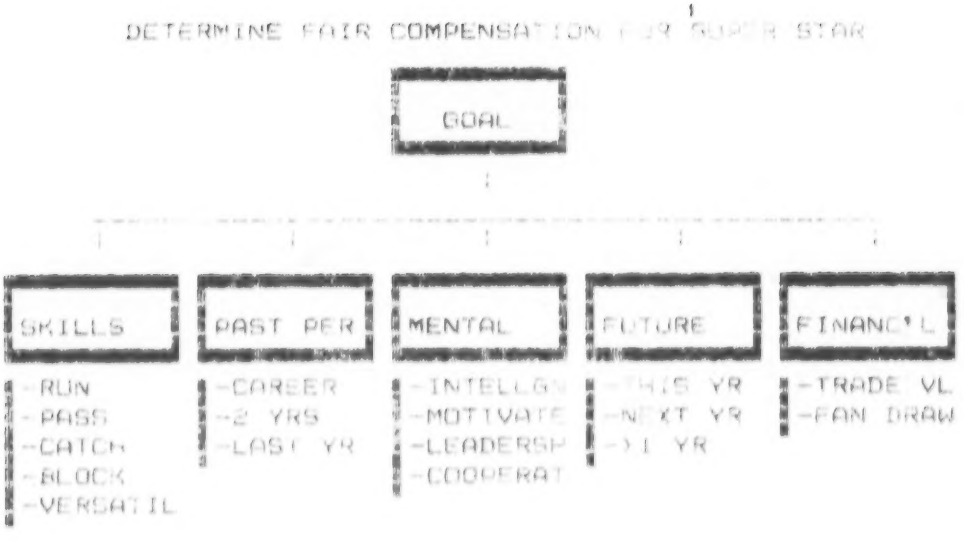
(1) Footnote. This methodology has provided remarkably accurate results when validated in situations where numerical measures and results are available. The author has conducted numerous experiments with a variety of individuals and groups to validate this process. Some care must be taken when translating from words to numbers in situations involving little redundancy, e.g. when comparing only three or four elements. However, when five or more items are being compared, there is enough redundancy to make the process extremely robost.



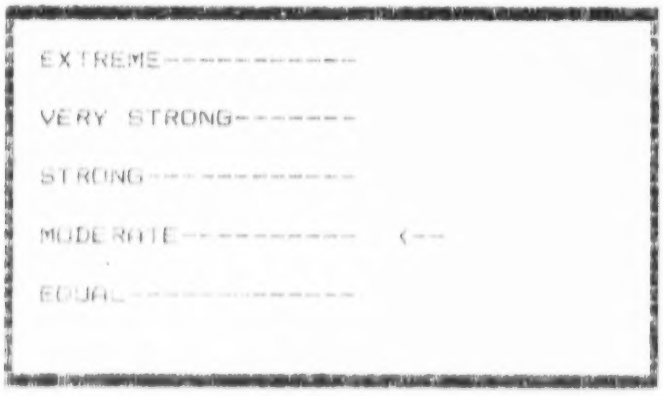
GOAL --- DETERMINE FAIR COMPENSATION FOR SUPER STAR
2 YRS --- 2 YEARS AGO
>1 YR --- MORE THAN ONE YEAR IN FUTURE
BLOCK --- BLOCKING, USUALLY IN A TRICK OR BROKEN PLAY
CAREER --- OVER ENTIRE PRO CAREER
CATCH --- CATCHING, USUALLY IN A TRICK PLAY
COOPERAT --- COOPERATIVENESS
FAN DRAW --- ABILITY TO ATTRACT FANS
FINANC'L --- FINANCIAL CONSIDERATIONS
FUTURE --- FUTURE PROSPECTS, LARGELY AFFECTED BY AGE AND PHYSICAL CONDITIO
INTELLGN --- INTELLIGENCE
LAST YR --- LAST YEAR
LEADERSH --- LEADERSHIP AND THE ABILITY TO MOTIVATE OTHERS
MENTAL --- MENTAL TRAITS
MOTIVATE --- PERSONAL MOTIVATION
NEXT YR --- NEXT YEAR
PASS --- PASSING
PAST PER --- PAST PERFORMANCE
RUN --- RUNNING
SKILLS --- SKILLS (PASS, RUN, BLOCK, CATCH, VERSATILITY)
THIS YR --- ABILITY TO STAY HEALTHY AND AVOID INJURY
TRADE VL --- VALUE FOR TRADING TO OTHER TEAMS
VERSATIL --- VERSATILITY, IN BEING ABLE TO PLAY OTHER POSITIONS

Criteria and Subcriteria
Figure 1

GOAL: DETERMINE FAIR COMPENSATION FOR SUPER STAR

With respect to
GOAL TO DETERMINE FAIR COMPENSATION FOR SUPER STAR

PAST PER :PAST PERFORMANCE
  is MODERATELY MORE IMPORTANT THAN
SKILLS :SKILLS (PASS, RUN, BLOCK, CATCH, VERSATILITY)



Making Judgment in Verbal Mode
Figure 2

is "too high", one is alerted to potential problems such as a clerical error in entering one of the judgments, or a lack of information and conviction by the individual or group providing the judgments.

Priorities for the decision criteria and alternatives are derived by calculating "eigenvalues" and "eigenvectors" of the reciprocal matrix representing the pairwise comparisons. (See Saaty [1980] for details.) The priorities for the SKILLS subcriteria are shown at the bottom of Figure 3. Passing has the highest priority (.613) as would be expected for a quarterback.

At the bottom of Figure 3 you will see an inconsistency ratio, in this case .039. The inconsistency ratio is a measure of the internal inconsistency between the judgments and would be 0 if the judgments were perfectly consistent. An inconsistency ratio of 1.0 would indicate judgments comparable to random judgments. Thus, the inconsistency ratio of .039 indicates that the inconsistency for our set of judgments about the relative importance of the SKILLS subcriteria is only about 4% of the inconsistency that would have resulted if we had used random judgments. As a rule of thumb, an inconsistency of 10% or more is a signal that something may be wrong. High inconsistencies result from (1) clerical errors (i.e. recording one or more judgments incorrectly), (2) a lack of information, (3) lack of concentration, (4) a truly inconsistent world, and (5) improper model structure.

When using Expert Choice, the decision maker can request suggestions for improving consistency. However, it is important that the methodology does not preclude inconsistencies in judgments. On the contrary, many decisions must be made while recognizing inconsistencies that exist in the real world.

Priorities for the subcriteria are arrived at in a similar manner. Figures 4 and 5 show how the priorities for the SKILLS criterion were derived.

Figure 6 shows the model with both "Local" and "Global" priorities. The local priorities are the priorities derived based on the pairwise comparisons, and represent the relative importance of an element with respect to its parent in the hierarchy. The global priority of an element represents the elements priority relative to the GOAL, and is computed by multiplying an elements local priority by the priority of its parent. Thus, for example, PASSING has a local priority of .613 (relative to each of the other SKILLS subcriteria), and a global priority of .147 (relative to the GOAL).

At this point we have completed STEP 1 (to evaluate the relative importance of each of these factors.)

ALTERNATIVES

Next, STEP 2 requires that, for each factor, we evaluate the talents of the individuals (the alternatives in the model), relative to other individual.

Figure 4 showed a view of the model from the perspective of the SKILLS criterion. Below the SKILLS criterion you see the subcriteria. Below each of the subcriteria you see the alternatives, in this case OLD PRO (An old pro with one or two years left), PRIME (an experienced quarterback in the prime of his career), and HOT STUF (a hot stuff rookie that could the best ever.) Figure 7 shows the model from the perspective of the running skills subcriterion. The priorities for each player with respect to running skills were derived from judgments about the relative preference of each of the alternatives (players) with respect to this subcriterion. These judgments and the resultant priorities are shown in Figure 8. As might be expected, the rookie the best at running and the quarterback in the prime of his career is the best at passing.

Similarly, priorities for the players with respect to each of the other subcriteria are derived based on judgments in the model. This completes STEP 2.

SYNTHESIS

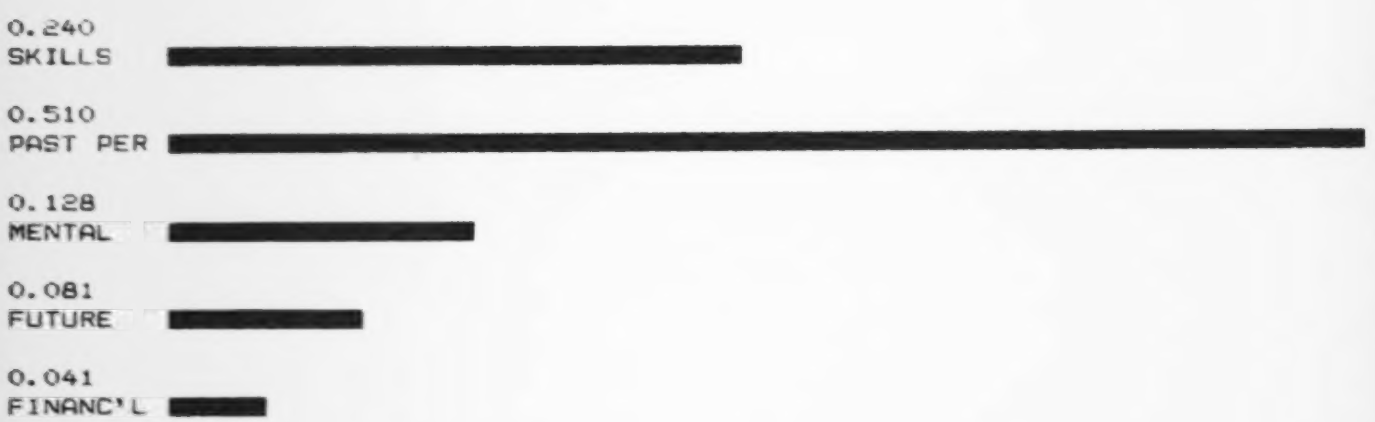
To accomplish STEP 3, we must synthesize the results of STEPS 1 and 2 to arrive at a relative measure of worth of each individual. The details of the synthesis are shown in Figure 9, sorted by priority. The results of the synthesis, shown in Figure 10, reveal that OLD PRO is just slightly

JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL TO DETERMINE FAIR COMPENSATION FOR SUPER STAR

	SKILLS	PAST PER	MENTAL	FUTURE	FINANC'L
SKILLS		(3.0)	3.0	3.0	5.0
PAST PER			4.0	7.0	8.0
MENTAL				2.0	4.0
FUTURE					3.0
FINANC'L					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more IMPORTANT than COLUMN element
unless enclosed in parenthesis.

SKILLS :SKILLS (PASS, RUN, BLOCK, CATCH, VERSATILITY)
PAST PER :PAST PERFORMANCE
MENTAL :MENTAL TRAITS
FUTURE :FUTURE PROSPECTS, LARGELY AFFECTED BY AGE AND PHYSICAL CONDITION
FINANC'L :FINANCIAL CONSIDERATIONS



INCONSISTENCY RATIO = 0.039

Judgments and Resulting Priorities
Figure 3

When using Expert Choice, the decision maker can request suggestions for improving consistency. However, it is important that the methodology does not preclude inconsistencies in judgments. On the contrary, many decisions must be made while recognizing inconsistencies that exist in the real world.

Priorities for the subcriteria are arrived at in a similar manner. Figures 4 and 5 show how the priorities for the SKILLS criterion were derived.

Figure 6 shows the model with both "Local" and "Global" priorities. The local priorities are the priorities derived based on the pairwise comparisons, and represent the relative importance of an element with respect to its parent in the hierarchy. The global priority of an element represents the elements priority relative to the GOAL, and is computed by multiplying an elements local priority by the priority of its parent. Thus, for example, PASSING has a local priority of .613 (relative to each of the other SKILLS subcriteria), and a global priority of .147 (relative to the GOAL).

At this point we have completed STEP 1 (to evaluate the relative importance of each of these factors.)

ALTERNATIVES

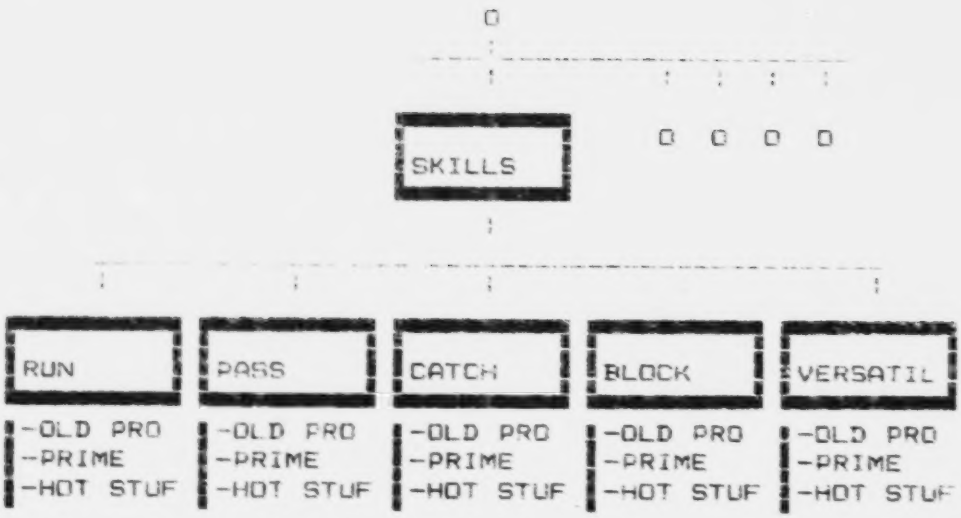
Next, STEP 2 requires that, for each factor, we evaluate the talents of the individuals (the alternatives in the model), relative to other individual.

Figure 4 showed a view of the model from the perspective of the SKILLS criterion. Below the SKILLS criterion you see the subcriteria. Below each of the subcriteria you see the alternatives, in this case OLD PRO (An old pro with one or two years left), PRIME (an experienced quarterback in the prime of his career), and HOT STUF (a hot stuff rookie that could the best ever.) Figure 7 shows the model from the perspective of the running skills subcriterion. The priorities for each player with respect to running skills were derived from judgments about the relative preference of each of the alternatives (players) with respect to this subcriterion. These judgments and the resultant priorities are shown in Figure 8. As might be expected, the rookie the best at running and the quarterback in the prime of his career is the best at passing.

Similarly, priorities for the players with respect to each of the other subcriteria are derived based on judgments in the model. This completes STEP 2.

SYNTHESIS

To accomplish STEP 3, we must synthesize the results of STEPS 1 and 2 to arrive at a relative measure of worth of each individual. The details of the synthesis are shown in Figure 9, sorted by priority. The results of the synthesis, shown in Figure 10, reveal that OLD PRO is just slightly



BLOCK --- BLOCKING. USUALLY IN A TRICK OR BROKEN PLAY
CATCH --- CATCHING. USUALLY IN A TRICK PLAY
HOT STUF --- A HOT STUFF ROOKIE THAT COULD BECOME BEST EVER
OLD PRO --- AN OLD PRO WITH ONE OR TWO YEARS LEFT
PASS --- PASSING
PRIME --- EXPERIENCED PLAYER IN PRIME OF CAREER
RUN --- RUNNING
SKILLS --- SKILLS (PASS, RUN, BLOCK, CATCH, VERSATILITY)
VERSATIL --- VERSATILITY IN BEING ABLE TO PLAY OTHER POSITIONS

Model View from Skills Criterion
Figure 4

JUDGMENTS AND PRIORITIES WITH RESPECT TO
SKILLS (GOAL

	RUN	PASS	CATCH	BLOCK	VERSATIL
RUN		(5.0)	4.0	5.0	1.0
PASS			9.0	9.0	7.0
CATCH				1.0	(4.0)
BLOCK					(4.0)
VERSATIL					

Matrix entry indicates that ROW element is
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more IMPORTANT than COLUMN element
unless enclosed in parenthesis.

RUN :RUNNING
PASS :PASSING
CATCH :CATCHING, USUALLY IN A TRICK PLAY
BLOCK :BLOCKING, USUALLY IN A TRICK OR BROKEN PLAY
VERSATIL :VERSATILITY IN BEING ABLE TO PLAY OTHER POSITIONS

0.157
RUN

0.613
PASS

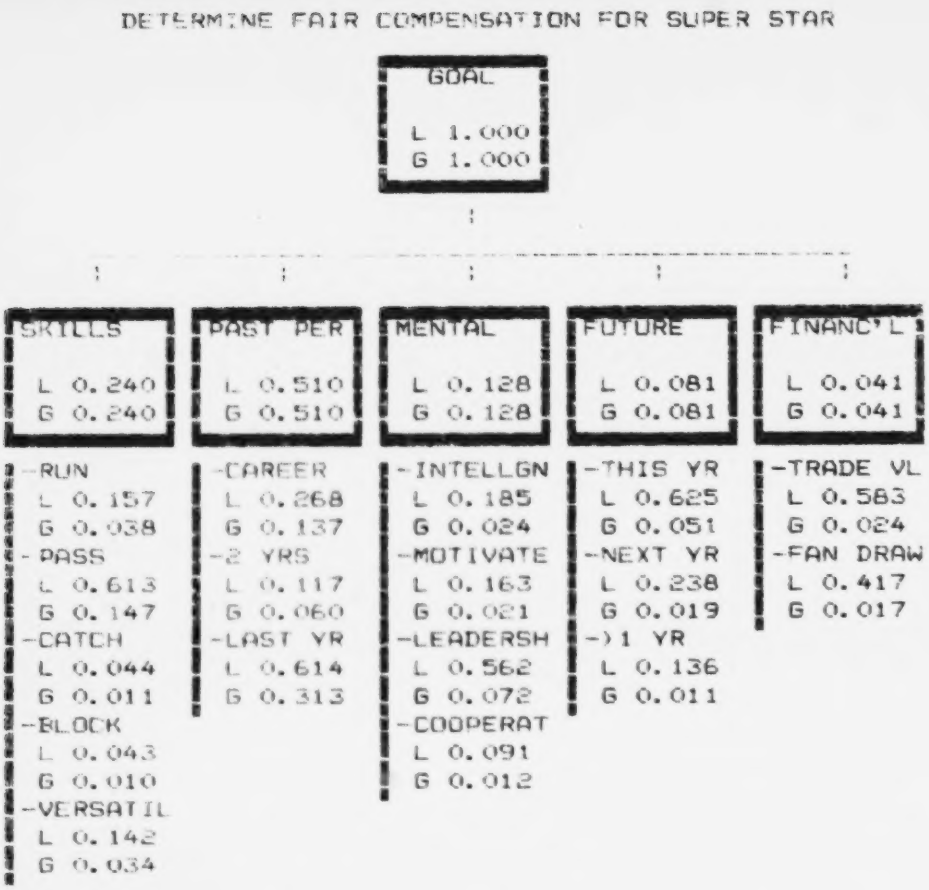
0.044
CATCH

0.043
BLOCK

0.142
VERSATIL

INCONSISTENCY RATIO = 0.041

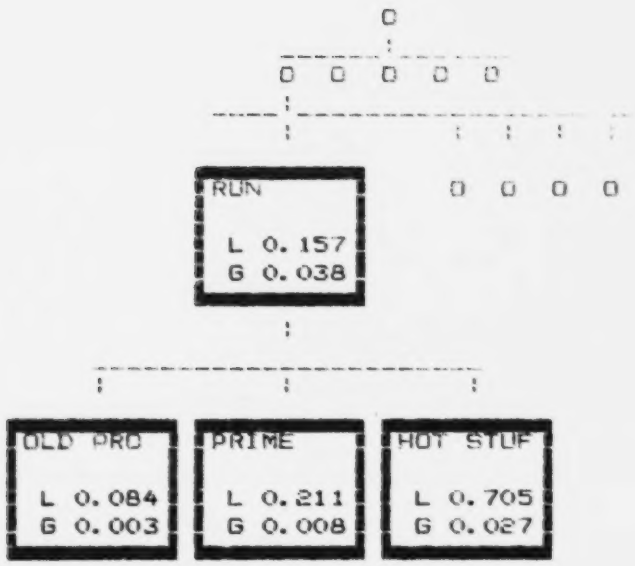
Judgments and Priorities for Skills Subcriterion
Figure 5




```
  GOAL     --- DETERMINE FAIR COMPENSATION FOR SUPER STAR
2 YRS      --- 2 YEARS AGO
)1 YR      --- MORE THAN ONE YEAR IN FUTURE
BLOCK      --- BLOCKING, USUALLY IN A TRICK OR BROKEN PLAY
CAREER     --- OVER ENTIRE PRO CAREER
CATCH      --- CATCHING, USUALLY IN A TRICK PLAY
COOPERAT   --- COOPERATIVENESS
FAN DRAW   --- ABILITY TO ATTRACT FANS
FINANC'L   --- FINANCIAL CONSIDERATIONS
FUTURE     --- FUTURE PROSPECTS, LARGELY AFFECTED BY AGE AND PHYSICAL CONDITION
INTELLGN   --- INTELLIGENCE
LAST YR    --- LAST YEAR
LEADERSH   --- LEADERSHIP AND THE ABILITY TO MOTIVATE OTHERS
MENTAL     --- MENTAL TRAITS
MOTIVATE   --- PERSONAL MOTIVATION
NEXT YR    --- NEXT YEAR
PASS       --- PASSING
PAST PER   --- PAST PERFORMANCE
RUN        --- RUNNING
SKILLS     --- SKILLS (PASS, RUN, BLOCK, CATCH, VERSATILITY)
THIS YR    --- ABILITY TO SAY HEALTHY AND AVOID INJURY
TRADE VL   --- VALUE FOR TRADING TO OTHER TEAMS
VERSATIL   --- VERSATILITY IN BEING ABLE TO PLAY OTHER POSITIONS

L          --- LOCAL PRIORITY: PRIORITY RELATIVE TO PARENT
G          --- GLOBAL PRIORITY: PRIORITY RELATIVE TO GOAL
```

Model Showing Local and Global Priorities
Figure 6



HOT STUF --- A HOT STUFF ROOKIE THAT COULD BECOME BEST EVER
OLD PRO --- AN OLD PRO WITH ONE OR TWO YEARS LEFT
PRIME --- EXPERIENCED PLAYER IN PRIME OF CAREER
RUN --- RUNNING

L --- LOCAL PRIORITY: PRIORITY RELATIVE TO PARENT
G --- GLOBAL PRIORITY: PRIORITY RELATIVE TO GOAL

Model View from Running Skills Subcriterion
Figure 7

JUDGMENTS AND PRIORITIES WITH RESPECT TO
RUN < SKILLS < GOAL

	OLD PRO	PRIME	HOT STUF
OLD PRO		(3.0)	(7.0)
PRIME			(4.0)
HOT STUF			

Matrix entry indicates that ROW element is
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

OLD PRO :AN OLD PRO WITH ONE OR TWO YEARS LEFT
PRIME :EXPERIENCED PLAYER IN PRIME OF CAREER
HOT STUF :A HOT STUFF ROOKIE THAT COULD BECOME BEST EVER

INCONSISTENCY RATIO = 0.028

Judgments and Resulting Priorities With Respect To Running Skills
Figure 8

DETERMINE FAIR COMPENSATION FOR SUPER STAR
TALLY FOR SYNTHESIS OF LEAF NODES WITH RESPECT TO GOAL

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
PAST PER =0.510				
.	LAST YR =0.313			
.	.	PRIME =0.163		
.	.	OLD PRO =0.151		
.	CAREER =0.137			
.	.	OLD PRO =0.090		
.	.	PRIME =0.046		
.	2 YRS =0.060			
.	.	OLD PRO =0.031		
.	.	PRIME =0.029		
SKILLS =0.240				
.	PASS =0.147			
.	.	PRIME =0.088		
.	.	OLD PRO =0.029		
.	.	HOT STUF =0.029		
.	RUN =0.038			
.	.	HOT STUF =0.027		
.	.	PRIME =0.008		
.	.	OLD PRO =0.003		
.	VERSATIL =0.034			
.	.	OLD PRO =0.023		
.	.	PRIME =0.006		
.	.	HOT STUF =0.006		
.	CATCH =0.011			
.	.	OLD PRO =0.004		
.	.	PRIME =0.004		
.	.	HOT STUF =0.004		
.	BLOCK =0.010			
.	.	HOT STUF =0.006		
.	.	PRIME =0.003		
.	.	OLD PRO =0.001		
MENTAL =0.128				
.	LEADERSH =0.072			
.	.	OLD PRO =0.046		
.	.	PRIME =0.021		
.	.	HOT STUF =0.005		
.	INTELLGN =0.024			
.	.	OLD PRO =0.016		
.	.	HOT STUF =0.006		
.	.	PRIME =0.002		
.	MOTIVATE =0.021			
.	.	OLD PRO =0.007		
.	.	PRIME =0.007		
.	.	HOT STUF =0.007		
.	COOPERAT =0.012			
.	.	HOT STUF =0.007		
.	.	OLD PRO =0.002		
.	.	PRIME =0.002		
FUTURE =0.081				
.	THIS YR =0.051			
.	.	HOT STUF =0.032		
.	.	PRIME =0.014		

Synthesis Details
Figure 9

DETERMINE FAIR COMPENSATION FOR SUPER STAR
TALLY FOR SYNTHESIS OF LEAF NODES WITH RESPECT TO GOAL

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
.	.	OLD PRO =0.005		
.	NEXT YR =0.019			
.	.	HOT STUF =0.012		
.	.	PRIME =0.006		
.	.	OLD PRO =0.002		
.	)1 YR =0.011			
.	.	HOT STUF =0.008		
.	.	PRIME =0.003		
.	.	OLD PRO =0.001		
FINANC'L =0.041				
.	TRADE VL =0.024			
.	.	PRIME =0.016		
.	.	HOT STUF =0.006		
.	.	OLD PRO =0.002		
.	FAN DRAW =0.017			
.	.	OLD PRO =0.013		
.	.	HOT STUF =0.002		
.	.	PRIME =0.002		

Model View from Running Skills Subcriterion
Figure 9 (Con't)

DETERMINE FAIR COMPENSATION FOR SUPER STAR

SYNTHESIS OF LEAF NODES WITH RESPECT TO GOAL

OVERALL INCONSISTENCY INDEX = 0.03

=====
1.000

HOT STUF --- A HOT STUFF ROOKIE THAT COULD BECOME BEST EVER
OLD PRO --- AN OLD PRO WITH ONE OR TWO YEARS LEFT
PRIME --- EXPERIENCED PLAYER IN PRIME OF CAREER

Synthesis Results
Figure 10

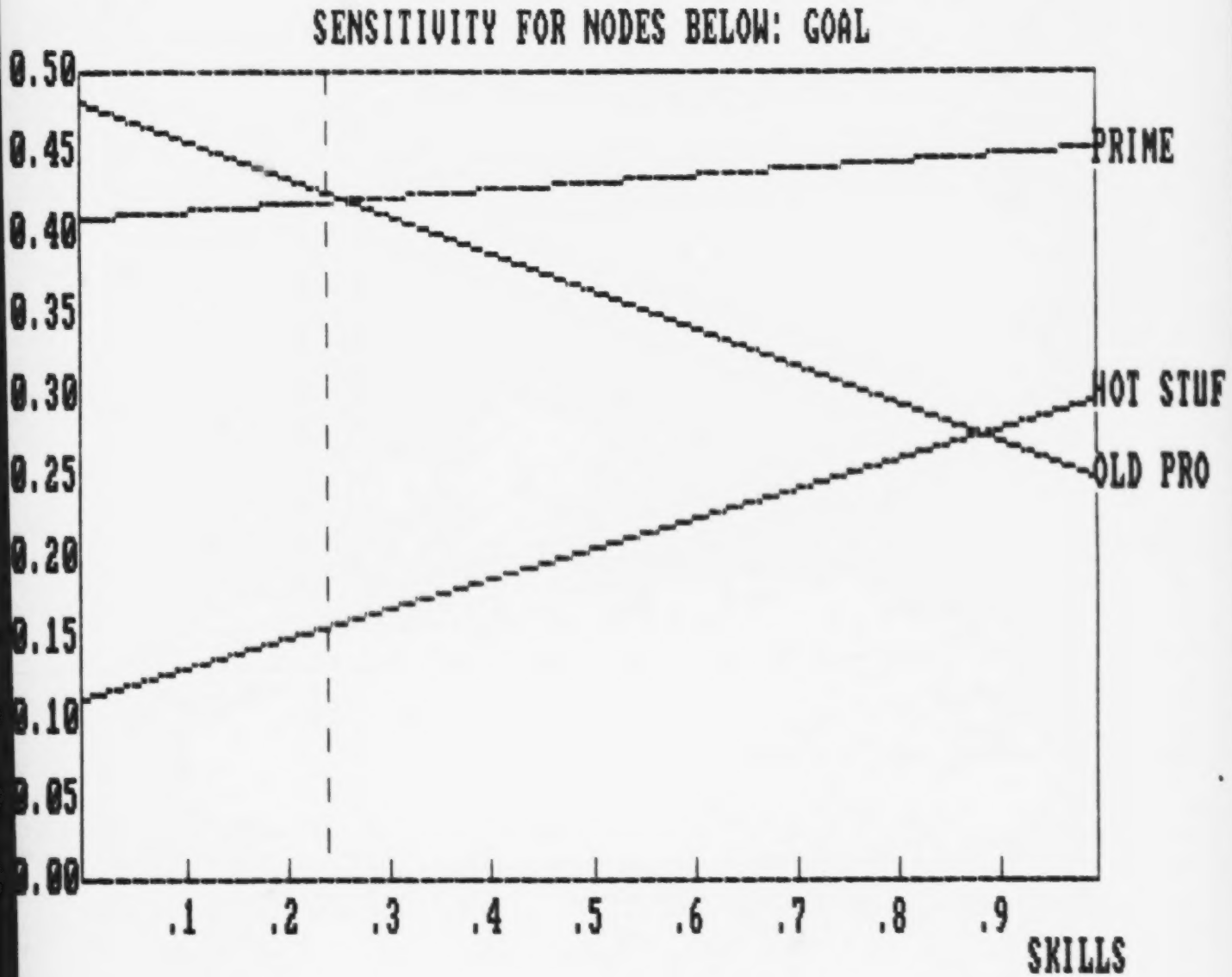
more valuable than PRIME, and that HOT STUF is considerable less valuable than each of the other two players.

If desired, a sensitivity analysis of the player priorities with respect to any criterion can be performed. A sensitivity analysis of the player priorities to the importance of the SKILLS criterion is shown in Figure 11. This illustrates, for example, that if the SKILLS criterion were made more important, the priorities of the HOT STUFF and PRIME would increase while the priority of the OLD PRO would decrease. (The dotted vertical line is the priority of SKILLS as determined by the judgments.)

Finally, we can perform STEP 4, by translating the relative worth of HOT STUFF into a compensation commensurate with the compensation of other individuals. This can be done as a simple ratio as performed with Lotus 1-2-3 and shown in Figure 12. Assuming that OLD PRO is being paid 625 thousand dollars, and PRIME is being paid 750 thousand dollars, a fair compensation for HOT STUFF would be 254 thousand dollars.

SUMMARY

A method of arriving at a fair compensation has been demonstrated that is able to consider many criteria or factors, some of which are objective and some subjective. This is accomplished by evaluating the relative importance of each of the factors, evaluating the talents of an individual relative to other individuals with respect to each factor, synthesizing to arrive at an overall worth, and translating this overall worth into a commensurate compensation.



Sensitivity Analysis
Figure 11

	PRIORITIES	SALARY (THOUSANDS)
OLD PRO	0.425	625
PRIME TIME PLAYER	0.419	750
HOT STUFF ROOKIE	0.156	X

$$\frac{X}{1375} = \frac{0.156}{0.844}$$

$$X = 254$$

Calculating Fair Compensation
Figure 12

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THE EFFECTS OF TRUCKING DEREGULATION ON THE U.S. ECONOMY, 1980-1985

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ABSTRACT

The Motor Carrier Act of 1980 was the first major deregulation of trucking transportation in the U.S. following forty-five years of increasingly complex regulation on the part of the Interstate Commerce Commission. The changes brought about by the Motor Carrier Act can be considered as an innovation which opened up productive and profitable opportunities for the motor carrier industry. The industry has adapted to the easier entry and tariff making rules over the five years since the passage of Act. A complete examination of the welfare effects of the Act is hampered because the economy entered a major recession just after the Act became effective in July 1980. The evidence examined here does support the conclusion that deregulation of the motor carrier industry increased transportation efficiency in the U.S.

THE HISTORICAL CONTEXT

The regulation of truck transport can best be understood in the historical context of the regulation of railroads. Regulation of transportation in the U.S. has a long history, at the Federal level going back to the year 1887 and the founding of the Interstate Commerce Commission. Ostensibly, that institution was set up to end "wasteful" competition in the American railroad industry. Wasteful practices included the overbuilding of track between certain cities; seven separate lines between Chicago and Kansas City, for example; and the frequent practice of secret price cutting which favored certain shippers and disturbed other shippers who were not so favored. (5, p.14) The solution to these problems was to control the railroad transportation market by establishing rules which restricted the routes over which a railroad was allowed to compete, and also restricted the prices which could be charged for transportation of certain products over certain distances. The ultimate result was a complex of ICC rules which covered every aspect of railroad transportation.

Time passed and technology changed, and new modes of transportation including trucking and air-freight came into existence. As these industries developed and became more capable, some shippers found it advisable to shift some of their business to the new modes of transportation, particularly trucking. It seems plausible that a regulated industry such as railroads would find it difficult to compete effectively in all circumstances against an unregulated industry such as trucking, not because of any inherent lack of ability on the part of the railroads, but because of the time lags involved in convincing the ICC that a change in regulations was required. By the 1930's, trucks had made significant in-roads into certain markets, capturing growing shares of the markets for transportation of highly-valued finished goods and perishable farm products such as fruits and vegetables.

The ICC appeared to be at a crossroad; it could unleash the railroads, deregulating them and allowing open competition with trucks; or it could expand the sphere of regulations to include trucks. Not surprisingly, the choice was to increase the sphere of regulation. There may have been misgivings about this on the part of some economists and other interested parties, but there was a lack of well-developed theory and empirical research sufficient to evaluate the social benefits and costs of such regulation in the 1930's. From the 1930's to the 1960's, Federal regulation of transportation continued to grow. The airline industry was regulated by two new institutions, the Federal Aviation Administration and the Civil Aeronautics Board. Other modes of transportation such as inland waterways and canals also were regulated.

The Federal regulatory agencies generally controlled several aspects of competition including restrictions on the right to enter the field of transportation, limitations on the routes or rights-of-way along which a firm could operate, and restrictions on what prices could be charged. A growing body of economists and public policy analysts concluded that the complexity and rigidity of transportation regulations led to less than optimal solutions to American transportation problems. The drive to deregulate the various components of the American transportation industry strengthened in the 1970's, led by economists who had, almost universally, become convinced that most forms of economic regulation should be cut back, if not eliminated.

DEREGULATION: THE MOTOR CARRIER ACT OF 1980

The year 1980 was a watershed year for Federal legislation which deregulated both the trucking and the railroad industries. To be sure, the Motor Carrier Act of 1980, and the Staggers Act of 1980 (named after its Congressional sponsor) which further deregulated railroads, did not spring full-grown from the Congress. Both the Ford and Carter Administrations had vigorously pushed the ICC to remove or lessen some of its more stringent rules. Beginning in 1975, the ICC began a series of rulings which eased or eliminated restrictions on the trucking industry. The extent of such deregulation, and the effects of the deregulation eventually caused the Congress in October 1979 to warn the ICC that it was overstepping the bounds of its legal authority.

Earlier in 1979 legislative proposals to deregulate both railroads and trucking had been sent to the Congress by President Carter. No action other than public hearings had been taken. The Carter proposal for trucking deregulation, co-sponsored by Senator Edward Kennedy called for sweeping reform. The Congressional bill was more conservative but still made major changes in the extent of trucking regulations. Perhaps the most important change embodied in the Motor Carrier Act of 1980 was a provision which shifted the burden of proof from the applicant for a particular route authority to the protestor. Previously the applicant bore the burden of showing that any request for new authority was "required by the presence of future public convenience and necessity". The law reversed this by stating that the protestor now had to show that it was "inconsistent with the public convenience and necessity," to allow the new operational authority. (4, pp. 36,37) In addition, the law restricted the realm of protestors to those motor carriers that had authority to offer the proposed service. If the protest was based on the fact that the requested authority would divert revenue from existing carriers the law stated that this was not to be construed <u>in itself</u> as inconsistent with the public convenience and necessity. This major shift in the way in which the Interstate Commerce Commission was to view requests for new operating

authorities ratified some of the limited deregulation which the ICC Commissioners had initiated prior to 1980. The Act also called for the ICC to reduce limitations on operating authorities, allowing more flexibility in the granting of operating authority for return hauls, service to intermediate points, and use of broader property definitions and less rigid territorial constraints. (4, p.37)

The response to the provisions of the Motor Carrier Act was significant and immediate. Before outlining the exact nature of the response by individuals both inside and outside the trucking industry, several points should be understood about both the nature of deregulation and the economic situation in the United States following the deregulation of the trucking industry.

DEREGULATION AS AN INNOVATION

Consider a simple definition of an innovation as a change in the status quo. The change can be an output change, for example, the introduction of a new product or service. The change may also be an imput change, such as the development of a new process which lowers costs of production. The Motor Carrier Act of 1980 can be thought of as primarily a process innovation which greatly lowered the cost of entry.

Prior to the Motor Carrier Act the truck transportation industry in the United States could be described as being in equilibrium. Significant regulations had been in place since the mid 1930's and it appears shippers, trucking firms, and labor had adjusted to the regulatory regime. New operating rights representing the right to carry cargo along particular routes were granted only when the market expanded, and existing trucking companies could operate with the assurance that no new competition would be allowed along the routes to which they held rights. As a consequence the right to a particular route became a valuable good. The rights were transferable in an active market developed over the years providing for the purchase or sale of trucking licenses (Table 1). Note that prior to deregulation, that is from 1975 to 1978, the average transfer price for licenses sold in June of each year was over $400,000. In 1979, following an ICC ruling which greatly opened up entry, the average price of a license fell to $55,000. Although prices rebounded in 1980, there were very few transactions, and these transactions occurred just prior to the effective date of the Motor Carrier Act, which was July 1, 1980. Following the imposition of the Act, the price of a license fell to a miniscule sum and the number of transactions fell almost to zero. (4, p.37)

The important point to note is that the Motor Carrier Act of 1980 upset the equilibrium, creating new opportunities for profit by existing firms or by potential firms wishing to enter the market. The major question to be examined is how rapidly and to what extent American entrepreneurs would react to the provisions of the Act. These reactions will be traced below.

Table 1
Sales of Trucking Licenses, 1975-1982

Year	Number in Sample	Average Sale Price	Number in June
1975	20	$398	43
1976	17	579	23
1977	28	531	15
1978	25	370	36
1979	24	55	13
1980	4	171	3
1981	1	13	3
1982	2	15	0

Source: (4, p.37, Table 3)

COMPLICATING FACTORS: THE RECESSIONS OF 1980 AND 1981-1982

Before examining the major changes which occurred in the number of business start-ups in the trucking industry and examining other questions related to increases in the failure rate, changes in modes of operations within the industry, and the welfare effects of these changes, it is important to understand the economic context in which these changes took place. The United States experienced an extremely sharp but short recession during the second quarter of 1980. This recession was caused primarily by a tightening up of standards related to credit transactions, which caused the Gross National Product to drop at a rate of almost 10 percent per annum during the second quarter of 1980. However, the policies leading to the recession were reversed quickly and the economy moved into a slow expansion for the second half of 1980 and the first half of 1981. Beginning in July 1981 and extending through November of 1982, the United States experienced a severe recession which raised unemployments rates to the highest level since the Great Depression of the 1930's and which precipitated large increases in bankruptcy rates.

When examining the affects of the Motor Carrier Act of 1980, the extent of the economic down turn following the implementation of the Act must be kept in mind. Beginning with January of 1983, the United States began a long expansion, which continues to this date. Our Gross National Product turned up significantly and the United States experienced above average growth during 1983 and 1984. Despite a slowdown in 1985, the total recovery proceeded at an above average rate, when compared to previous recoveries, through the end of 1985. In 1986, the economy moved forward during the first quarter of the year at an annual real growth rate of 3.2 percent. It appears that the downward shift in interest rates throughout the economy, and the extensive fall in the price of oil will contribute to a strong year during the remainder of 1986 (Chart 1).

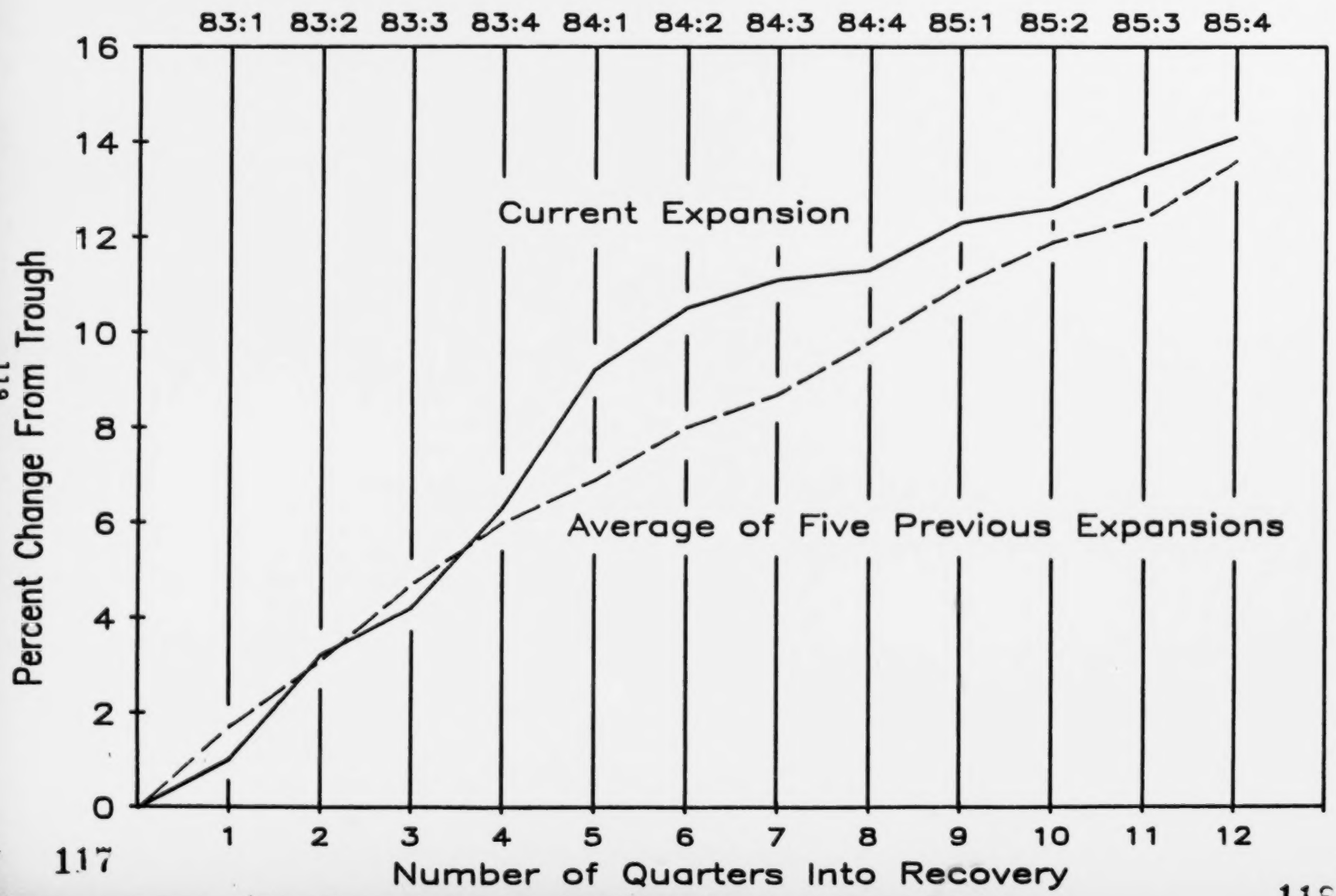
THE IMMEDIATE EFFECTS OF TRUCKING DEREGULATION

Economists would predict that a decrease in the price of a particular good or service would lead to an increase in the quantity of that service demanded and purchased by the public. Similarly, a decrease in the price of obtaining an ICC Grant of Authority to operate as a trucking concern or as a broker would lead to an increase in the number of authority grants requested from the ICC. Following the implementation of the Motor Carrier Act of 1980, on July 1, 1980, the number of authority grants requested in the next twelve months rose to 27,024, a large increase from the previous year.

To fully understand the effect of the law, however, a comparison should be made to the year 1975, before the U.S. Commerce Commission loosened up any rules regarding entry. In the year 1975 only 3,100 applications were received and processed by the ICC. The number rose rapidly after 1978 as the ICC gradually eased some of its regulations. After 1980 the flow remained high relative to historic levels but dropped considerably from the 27,000 plus observed in the first year following legislation (Table 2). Although the number of new requests for grants of authority stablized after 1981, the composition of the grants by type of grant and by type of applicant changed considerably. As might be expected the immediate increase in applications for new authority following the deregulation came from firms already in the trucking industry. Only 11 percent of the 27,024 grants issued in 1980-1981 went to new applicants. During the last six months of 1984, in contrast, 65 percent of all grants of authority went to new applicants. Clearly the market worked increasingly well to bring new entrants to the market place as information about the opportunities available became more widely distributed throughout the economy.

Chart 1

Economic Recovery 1983 — 1985



Source: Office of Economic Research, based on Department of Commerce GNP Data.

Table 2
Grants of Authority to Common and contract Carriers
(Number, Percent)

Year Under MCA	Total Auth	Average No. Grants/Month	Common Carriers	Contract Carriers	Brokers	New Applicants
7/1/80-6/30/81	27,024	2,252	82	16	2	11
7/1/81-6/30/82	12,072	1,006	67	27	6	43
7/1/82-6/30/83	12,168	1,014	65	28	7	44
7/1/83-6/30/84	12,480	1,040	52	37	11	50
7/1/84-12/31/84	6,804	1,134	44	44	12	65

Source: (2), (6)

The distribution of grants of authority between types of carrier also changed greatly over the five-year period following the MCA. In 1980-81 fully 82 percent of new grants of authority were for common carriers. For the most part these grants went to the existing firms that were seeking to expand and make more general the licenses they held. By 1984 the number of grants going to common carriers had declined to only 44 percent of the total. In contrast, the number of grants given to contract carriers increased from 16 percent of the total in 1980-81 to 44 percent in the first six months of 1984. In a similar fashion, the number of grants to brokers increased from 2 percent of the total in 1980-81 to 12 percent of the total during the last six months of 1984.

The net result of the large number of requests for new authority has been a steady increase in the number of motor carriers and freight forwarders holding ICC authority (Table 3). This total increased from 17,267 firms in 1979 to 33,548 in 1985. Two trends should be noted. First, the number of Class Two Carriers, those with sales between one million and five million dollars per year has declined precipitiously from 1978 through 1985. At the same time the number of Class Three Carriers, those with less than one million dollars in sales per year has increased from 14,610 to 30,357. The shift in the composition of the industry and the increase in the total number of firms competing for interstate trucking hauls has clearly increased the level of competition in the market place for transportation.

Table 3
NUMBER OF MOTOR CARRIERS OF PROPERTY AND FREIGHT FORWARDERS HOLDING ICC AUTHORITY

Item	Fiscal Year 1978	1979	1980	1981	1982	1983	1984	1985
Number of Carriers								
Class I	1,045	992	947	1,031	1,144	1,139	1,088	1,013
Class II	2,929	2,754	2,164	2,293	2,139	1,631	1,554	1,489
Plus:								
Class I and II Carriers Relieved from Class I and II Reporting Requirements	-	-	324	383	380	336	469	444
Plus Class III Carriers	12,900	13,337	14,610	18,563	22,059	24,411	27,370	30,337
Plus Freight Forwarders	180	184	193	244	241	231	261	265
TOTALS	17,054	17,267	18,238	22,514	25,963	27,748	30,742	33,548

Source: (2, Appendix 1)

The need to quote a variety of numbers here does not obscure the basic facts about the extent of structural change in the trucking industry over a five-year period. Existing trucking firms found themselves able to expand their ability to compete by extending their network of routes, by obtaining more than one type of authority or expanding the number of authorities they held, or by introducing a number of innovations into their production process. For example, many common carriers extended their route network by getting the most general type of license for common carriers, authorizing them to deliver loads throughout the country. Private fleets, those fleets operated by very large enterprises, applied for authority to become licensed carriers for other firms.

By 1984, 27 percent of the private fleet operators had received authority to act as either a common or contract carrier. This expansion of private fleet capability clearly increases efficiency by allowing large firms which maintain their own trucking fleets to more efficiently use their fleet for back haul purposes or to supplement loads as appropriate. New firms entering the industry are more frequently asking for contract authority allowing them to haul full loads (FL) rather than less than full loads (LFL). Many of these contract carriers enter into long term contracts with particular shippers or act as owner/operators with contract arrangements with brokers or freight forwarding firms. (2)

Several definitions should be kept in mind in order to understand the types of innovations to be discussed here. Regulated interstate carriers commonly are broken into four groups. These groups include common carriers, contract carriers, freight forwarders, and brokers. Common carriers may have a limited grant of authority to haul within a certain geographic area or along certain routes or they may have a general authority allowing them to carry goods throughout the country. Only certain classes of goods may be hauled by common carriers. Contract carriers generally haul specialized classes of goods on a contract basis for large shippers. They normally carry full truck loads, and in a fully regulated atmosphere were restricted from certain modes of operation which would have increased their efficiency. For example, they did not have the flexibility to carry different goods on a back haul when returning to the point of origination.

Freight forwarders are considered common carriers who may not own any transport capability. Freight forwarders may originate cargos but they may not transport the cargo in their own fleet. They must purchase transportation from either a common or a contract carrier depending on the nature of the commodity which they are forwarding. Brokers may or may not be carriers. The term really refers to the function carried out by the broker which is similar to the function of a freight forwarder, with the exception that the broker is subject to fewer regulations.

If you compare the relative growth of freight forwarders and brokers, brokers would be expected to be growing more rapidly. This is true both in respect to numbers, as noted in Table 2, and also with respect to the share of the total brokerage function going to brokers. Most recent statistics indicate that brokers have taken away approximately 50 percent of the business formally handled by freight forwarders. The flexibility provided the brokers because of lack of regulation clearly seems to be the dominant reason for this change. Both freight forwarders and brokers have introduced the very latest in data processing equipment in order to more clearly track cargo. Indeed, some brokers consist of only an office, a computer, and a telecommunications hookup which allows them to speak to other computers or computer terminals. (6)

Summing up, the initial response to the deregulation of motor transport through the Motor Carrier Act was an increase in applications for authority to enter new types of trucking or expand routes. Existing firms took first advantage of the change in the regulatory structure, but as information about opportunities became more wide spread, new firms took advantage of the opportunities. Over the five-year period since the passage of the Act, the structure of the industry has changed considerably in terms of the types of operating authorities held by various firms and the role of a large number of new small carriers operating within the industry.

MORE RECENT ADJUSTMENTS TO DEREGULATION

The initial response to deregulation in the trucking industry was the expansion of existing firms into new types of authorities where appropriate. These expansions helped to "rationalize" the structure of the industry. Subsequent reactions included the development of a number of product or service innovations which heightened the degree of competition in the industry and provided shippers with many new alternative services. With the increase in the number of competitors in the trucking industry, some firms chose to develop first, second or third day deliveries which facilitated a transfer in many industries to a "just-in-time" inventory management system. Contracts which promised particular delivery dates were developed for situations which involved simple single line transportation, and complex intramodal, and intermodal shipments which required careful coordination across numbers of carriers. The ability to control such complex transportation alternatives clearly revolved around the wide spread introduction of computers and computer terminals as scheduling and control devices within the industry. Specialized firms have developed in the industry which provide logistical consultation services, providing instantaneous rate quotations and status information on shipments within large networks. (2, pp. 17,18)

In addition to new services, the intense competition within the various components of the industry has produced a general shift in the rate structure. Rate Bureaus, combinations of trucking firms which receive antitrust immunity under the existing legislation, collectively develop joint rates and general rate increases. These rates then serve as a basis for discounting by other carriers. Firms which file individual tariffs have been forced by the discounting situation to more clearly define their rate structure in their published tariffs. From 1979 to 1983 the number of tariffs filed increased from approximately 27,100 to approximately 230,000. The number of rates published declined to 59,000 in 1984 and 42,000 in 1985. The decline in the number of independent rate actions does not reflect a decline in competition. Many firms have decided that discount rates can be embodied in their tariffs filings, therefore allowing one filing to provide much more information to potential shippers. (2, p. 5)

Discounts on the rates offered by Rate Bureaus generally fall within a 15 percent to 40 percent range, with the majority of discounts in the 20 to 25 percent range. Because class rates established by Bureaus have generally risen the effective discount to shippers may not be as large as the posted discount from the base price. Less than truckload (LTL) rates appear to have fallen less than truckload (TL) rates. This may be due to the fact that the larger firms which dominate LTL traffic have incurred extensive costs in computerizing, and in expanding terminal and handling facilities. The more labor-intensive handling process for LTL traffic may also have limited price decreases. (2, p. 6)

There has been some feeling among members of the industry that motor carrier pricing is often predatory. Predatory pricing occurs when a price is set below the cost of production in order to drive competition out of a particular market. A recent study for the U.S. Congress, prepared by the General Accounting Office concluded that discount pricing was not predatory and that reduced rates offered by carriers were generally used only to maintain or increase traffic volume. The General Accounting Office did find that occasionally rates which resulted in revenues below the break-even point were offered during temporary promotion periods, or when firms were attempting to capture "spill over traffic" from shippers that served many different market locations. Occasionally, the GAO found that tariffs were mistakingly set below break-even points when firms were not able to capture accurate cost data through their accounting systems. (2, pp. 6-7, 7, pp. 15-18)

There have been clear differences in the way carriers operating in the LTL market operate as compared to carriers in the TL market. The LTL market features large carriers with extensive capabilities and major networks of depots. These large carriers stress the advantages that they offer with respect to one-stop shopping, logistics planning assistance, and guaranteed delivery in conjunction with highly-automated information systems and competitive prices. Although there are smaller carriers in the LTL area, most of the expansion in that area has been accomplished by existing firms adding to their route network and expanding the number of areas and locations which they service. Truckload shipments are more and more frequently being carried by new carriers that operate along irregular routes with non-union operators. These TL carriers have captured a significant proportion of TL freight from the larger carriers which traditionally dominated this market. The revenues of the four largest TL carriers dropped by almost 50 percent from 1979 to 1983. Since large LTL carriers have lost some of their TL business to more competitive smaller firms, LTL rates have shifted up somewhat relative to TL rates. (2, p. 7)

INDUSTRY STRUCTURE

The more competitive situation within the regulated trucking industry has enabled the industry to compete effectively with other modes of transportation and with nonregulated truck traffic. From 1980 to 1984 all truck transportation expanded its share of domestic intercity ton miles from 22.3 percent to 24.2 percent (Table 4).

Table 4
Percentage Share of Domestic Intercity Ton-Miles by Mode

Mode	1980	1984
Truck	22.3	24.2
Rail	37.5	37.5
Air	0.20	0.26
Oil Pipeline	23.6	22.7
Rivers & Canals	12.5	12.3
Great Lakes	3.9	3.0

Source: (2, p. 8)

Only air freight shipments which expanded from 0.2 percent in 1980 to 0.26 percent in 1984 also showed an increase in share of mileage. All other transportation modes showed losses or constant shares within the market place. Within the trucking industry regulated truckers have been able to expand during the 1980-1984 period, although their share of total intercity tonnage has not increased to the same extent that nonregulated truck traffic has increased (Table 5). The ability of the regulated trucking sector to maintain growth in an intensively competitive market place probably reflects the efficacy of deregulation.

Table 5
Percentage Share of Domestic
Intercity Tonnage (All Modes)

	1980	1984
ICC Regulated Truck	14.8	15.2
Other Truck Traffic	21.7	23.1
All other modes	63.5	61.7

Source: (2, p. 9)

With a large number of new entrants within the TL market and a rapid expansion of existing LTL carriers, there has been considerable redistribution of available traffic among motor carriers. "From 1979 to 1983, the four largest motor carriers of general freight increased their share of LTL revenues from 26 percent to 31 percent. The seventy-five largest carriers increased their share from approximately 79 percent to 88 percent. This expansion in share is primarily due to the fact the LTL carriers expanded the number of places serviced and the number of terminals they maintained."(2, p. 9) In general, concentration within the market places previously serviced by carriers has not increased. Economists would generally consider trucking to be an unconcentrated industry relative to other American industries.

EXPECTED PROBLEMS THAT DID NOT OCCUR

Deregulation of the trucking industry has increased competition, provided many new carriers, improved the mix of services and the types of services produced by the industry, and provided shippers with many alternatives among which to choose. One of the major concerns voiced by opponents of deregulation prior to the Motor Carrier Act was that shippers located in rural communities or at great distances from major interstate highways would be unable to obtain shipping services if the regulatory agency did not require that services be provided to these points. A survey of shippers in selected rural communities conducted for the Department of Transportation in 1985 showed that most shippers perceived either no change in the extent of competition among carriers or they noted an increase in competition among carriers in their geographic area. These results hold true whether you are considering locations easily accessible to interstate highways or locations that are inaccessible to interstate highways (Table 6). (1, pp. 16-18)

Table 6
Level of Competition Among Motor Carriers
by Distance from Interstate Highways, (Percent)
1984-1985

Accessibility	No Change	More Competition	Less Competition
Accessible to Interstates (0-25 miles)	76.9	15.4	7.7
Inaccessible to Interstates (Over 25 miles)	68.1	20.4	11.5
Total	72.1	18.1	9.8

Source: (1, Table 5, p. 16)

Other critics of potential deregulation argued that shippers would not be able to obtain outbound services from their location. That is, they would find it difficult to ship their product to particular locations. When queried about this during surveys conducted in 1984 and 1985, most shippers indicated that they had little trouble reaching desired shipping points. Depending on the size of the load being shipped, from 87.9 percent to 97.3 percent of shippers indicated that they had no trouble reaching desired shipping points (Table 7).

Table 7
Are There Any Shipping Points Difficult
To Ship To?, 1984-1985

	Yes	No
Primarily Small Package	12.1	87.9
Primarily LTL	7.4	92.6
Primarily TL	2.7	97.3
Total	7.9	92.1

Source: (1, Table 4, p. 16)

Finally, shippers were asked about the availability of carriers given the shipping environment for each respondent. For example, firms which ship primarily small packages were asked about the availability of services which specialized in small package delivery. Although the most common responses were that the availability of alternative carriers either remained the same or that they didn't know about any changes in the availability of alternative carriers, more respondents reported increases in the availability of carriers than reported decreases. This was true for all classes of shippers (Table 8).

Table 8
Pattern of Percent Change in Availability of Carriers
by Shipping Environment, 1984-1985
Total Sample

Classification of Shipping Environment	Increase	Decrease	Remained Same	D/K
Primarily Small Package	22.4	8.6	37.9	29.3
Primarily LTL	20.4	18.5	34.3	25.9
Primarily Tl	24.3	18.9	32.4	24.3
Total	21.7	15.8	35.0	26.6

Source: (1, Adapted from Table 3B, p. 14)

Finally, one complaint frequently made prior to deregulation was that deregulation would decrease the quality of service provided by the industry. A survey made by Dr. Thomas Gale Moore, currently a member of the Council of Economic Advisors in the Reagan Administration shows that for the majority of respondents service following the Motor Carrier Act of 1980 was either unchanged or improved compared to the earlier situation (Table 9). Overall 86 percent of the respondent felt that service was either improved or unchanged. The proportion of the respondents believing that conditions had improved was more than double the proportion believing that the conditions of service had become worse. (4, Table 8, p. 40) Apparently, we can conclude that the deregulation of the trucking industry has decreased prices, increased the variety of services available, and in general improved service and the availability of transportation alternatives to various classes of shippers and to rural shippers. If shippers appear to be better off, can we say the same thing about motor carriers, and about the employees of the regulated trucking firms?

Table 9
Quality of Service After Motor Carrier Act of 1980

	Percent		
	Improved	Unchanged	Worse
Quality of trucks	24	68	8
Promptness of service	47	46	7
Availability of service	73	17	10
Reliability	37	52	11
Adjustment of claims	18	63	19
Need for supervision	14	69	17
Willingness to serve off-line points	34	42	24
Overall	35	51	14

Source: (4, p. 40)

RETURN TO CAPITAL IN TRUCKING

It is difficult to predict, a priori, whether the return to capital would increase or decrease following deregulation. If deregulation provided a protected environment for trucking firms, then one would have expected capital to be potentially earning some sort of economic rent which could be maintained because of restrictions on entry into trucking. However, labor, operating through the Teamsters Union, might well have been able to erode away any excess profits made by trucking firms because of its equally proctected position. After deregulation, the rate of return to capital used in trucking might increase if the rate of increase of efficiency in the industry outpaced the rate at which the price of trucking services fell.

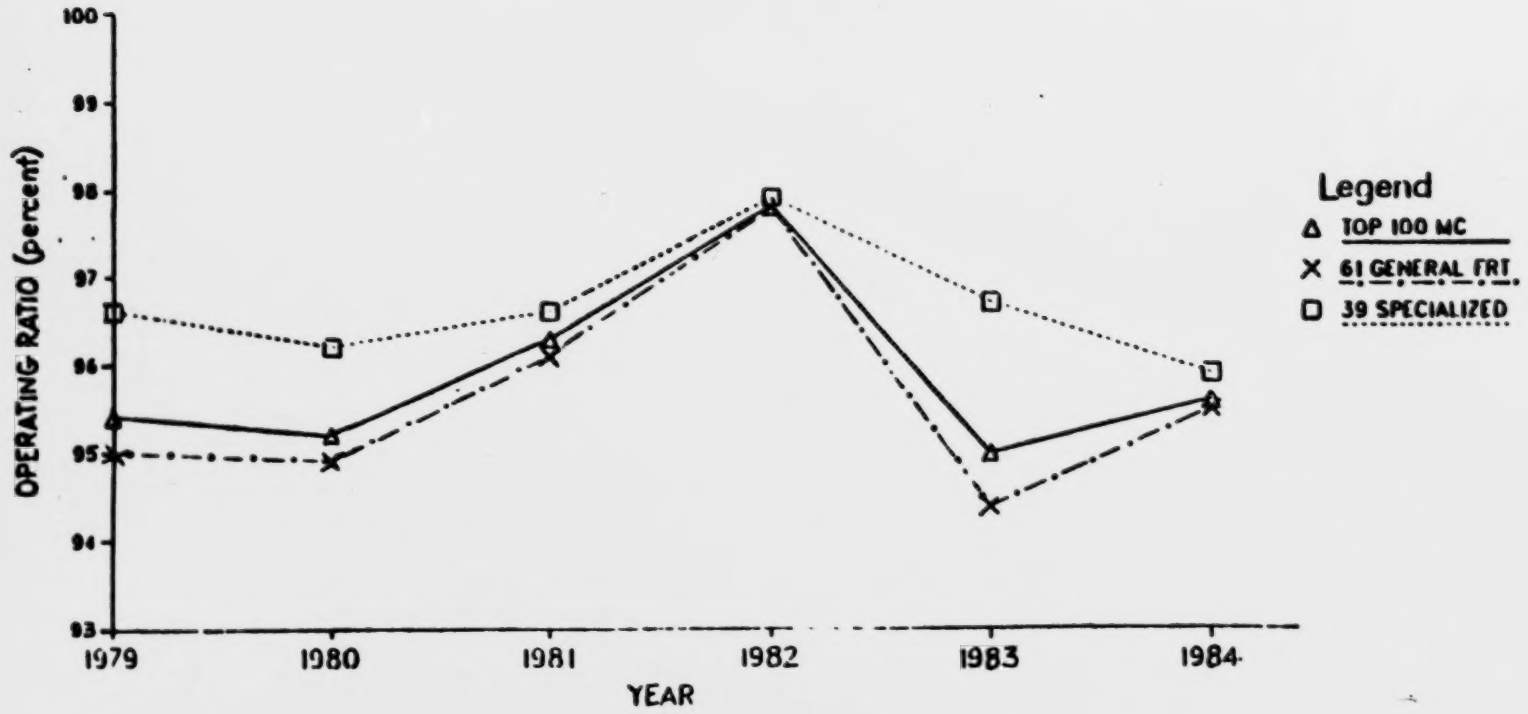
Simple comparisons between pre-regulation rates of return and post-regulation rates of return are extremely difficult to make, particularly because of the intervention of a major recession immediately following the implementation of the Motor Carrier Act of 1980. Statistics on profits and rates of return are also very difficult to obtain for the entire industry. Most reports issued by the ICC are restricted to rates of return and profits for the 100 or 200 largest carriers. Charts 2 and 3 show the operating ratios, that is the ratio of total expenses to total revenues, and the percent return on equity for the 100 largest motor carriers in the United States for the years 1979-1984. When comparing the two charts, note that they appear to be the inverse of each other. When operating ratios go up the rate of return on equity goes down and vice versa. Operating ratios increased in 1981 and 1982 as the trucking industry attempted to cope with the recessionary conditions in the United States. (2, pp. 22-32)

Operating expenses probably increased because the trucking industry, like most other industries, was unable to decrease variable costs of production as rapidly as total output decreased. The combination of lagging variable costs and fixed overhead costs drove up total expense ratios. Return on equity fell during both years, as could be expected. In addition to showing the return on equity for the 100 largest motor carriers, Chart 3 also shows the return on equity for all manufacturers. Note that in comparison to the manufacturing returns, returns in the trucking industry do not look unreasonable. Specialized trucking firms, contract carriers carrying specialized products such as motor vehicles, liquified petroleum, refrigerated products, building materials and heavy machinery, generally show a higher-than-average rate of return. General freight carriers show slightly lower rates of return, but rates that are comparable to the all manufacturing average. The conclusion to be drawn from Chart 3 is that deregulation appears to have had little negative effect on the return on equity earned by large firms in the trucking industry. Movements in the return on equity over time appear to be due to general economic conditions rather than to conditions specific to the trucking industry.

Chart 2

100 OF THE LARGEST MOTOR CARRIERS OF PROPERTY

OPERATING RATIO
TOP 100 MC PLUS BREAK-DOWN INTO GENERAL FRT AND SPECIALIZED
YEAR 1979 – YEAR 1984
(PERCENT)



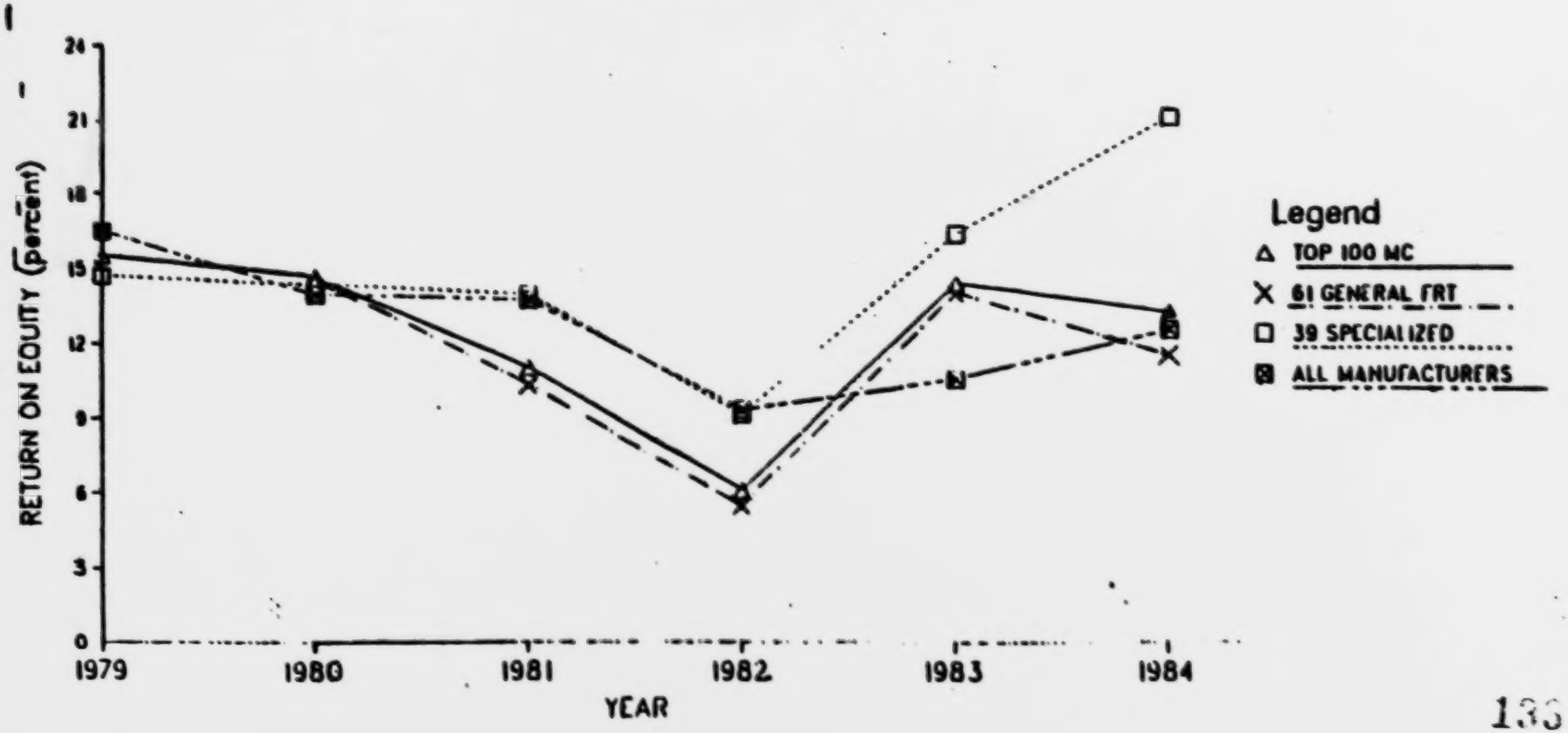
SPECIALIZED COMMODITY CARRIERS INCLUDE HAULERS OF HOUSEHOLD GOODS, MOTOR VEHICLES, LIQUIFIED PETROLEUM, REFRIGERATED PRODUCTS, BUILDING MATERIALS, HEAVY MACHINERY AND OTHER SPECIALIZED PRODUCTS.

Source: (2, Appendix IV)

Chart 3

100 OF THE LARGEST MOTOR CARRIERS OF PROPERTY

PERCENT RETURN ON EQUITY
TOP 100 MC PLUS BREAK-DOWN INTO GENERAL FRT AND SPECIALIZED
VERSUS ALL MANUFACTURERS
YEAR 1979 – YEAR 1984



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SPECIALIZED COMMODITY CARRIERS INCLUDE HAULERS OF HOUSEHOLD GOODS, MOTOR VEHICLES, LIQUIFIED PETROLEUM, REFRIGERATED PRODUCTS, BUILDING MATERIALS, HEAVY MACHINERY AND OTHER SPECIALIZED PRODUCTS.

Source: (2, Appendix IV)

Operating ratios fell sharply in 1983 and rose slightly in 1984 but remained significantly below operating ratios in earlier years. The decrease in operating ratios can be attributed partly to the recovery of the American economy which allowed the trucking industry to expand real output at a rate of 12.4 percent in 1983 and 8.6 percent in 1984. This expansion of trucking output was greater than the rate of increase for all transportation services, which grew 5.9 percent in 1983 and 6.8 percent in 1984. The continued influx of new, smaller firms into the trucking industry may also have contributed to the improvement in operating ratios because of the consistent competitive pressure on the pricing side of truck services. Firms wishing to compete had to continuously re-evaluate their operating situation and attempt to find appropriate economies and cost reductions. (8, p. 83)

BUSINESS FAILURES

The struggle to maintain a competitive cost position has not been an easy one in the trucking industry since 1980. Business failures, as reported by the Dun and Bradstreet Corporation, have increased at an exponential rate since 1979. From 1980 to 1984 failures in the local trucking industry, the non-regulated segment of the trucking industry, increased 334 percent. Failures in the inter-city segment of the industry increased 439 percent and failures throughout the entire economy increased by 246 percent (Table 10). A significant portion of the failures throughout American industry can be attributed to the economic conditions experienced in 1980, 1981 and 1982. Paradoxically, bad times generally create a number of new smaller businesses as unemployed individuals seek constructive outlets for their time. New business start-ups go up in recession times and business failures increase markedly two-to-three years following the increased business start-ups. It is not surprising, therefore, that the number of business failures continued to increase throughout 1983, 1984 and 1985. The important point is that the increase in business failures in both the regulated and non-regulated portions of the trucking industry is not completely out-of-line when compared to failures in other industries. (6)

Table 10
Business Failures in the
Trucking Industry, 1975-1985

Year	Local	Intercity
1975	127	93
1976	180	82
1977	119	57
1978	100	56
1979	104	67
1980	237	125
1981	380	193
1982	627	293
1983	675	495
1984	792	549
1985	752	717

Source: (6, Updated through 1985)

It appears that some portion of the business failures in the industry can be attributed to the effects of deregulation. Again, this is not surprising. According to a report prepared for the Office of Regulatory Affairs in the Department of Transportation in September 1985,

> "the MCA not only encouraged the entry of new trucking companies but also eliminated the long-standing barriers that had prevented intense head-to-head competition among carriers. ... Submarkets had been carefully segregated according to operating authorities granted by the ICC and according to carrier types. Motor carriers were specialized by commodities carried and by territory. ... The partial deregulation of the MCA lowered procedural and legal barriers to new entry and expansion into new markets, and it also blurred the distinction between carrier types. ... As formally "proctected" markets became open to many competitors, problemed companies became exposed. Non-Union and other low-cost carriers discounted rates to obtain traffic from the higher cost carriers, and in response, discount rates have virtually become the norm. Some of the discounting carriers were unaware of their costs, and their lowered rates have made their already slim profit margins disappear altogether." (6)

The sorting-out process induced by the deregulation has clearly caused some dislocations in the industry. However, for every clear case of failure, there are offsetting cases where existing firms, both union and non-union, have improved their situation and expanded their markets, their sales, and their profit.

Several examples from the Department of Transportation report cited above indicate the range of creative adaptations made by American trucking companies, both union and non-union, in response to the challenge of meeting a deregulated market place. (6)

- Roadway Express conducted market research in 1982 to identify shippers' needs, established a computerized system to track shipments, and developed other improvements for customer convenience. Performance programs were introduced, operational improvements made, and 70 percent of its line haul fleet was converted to 28-foot, 102 inch wide trailers to improve line-haul productivity and service. Employees have been involved in quality improvement teams established throughout the system. A long-haul LTL carrier, the company now has 540 terminals nationwide. To serve different segments of the market, the Roadway Services Group, which includes Roadway Express, acquired a short-haul LTL company (Spartan Express, Inc.) and a TL company (Nationwide Carriers, Inc.) in 1984, and in 1985 established a small package company (Roadway Package System, Inc.) and acquired an expedited special service company (Roberts Express, Inc.). Roadway's operating ratio has improved from 92.7 in 1982 to 90.4 in 1984.

- Consolidated Freightways Motor Freight (CFMF) is a common and contract general freight carrier, carrying principally long haul LTL traffic. The parent company, Consolidated Freightways Corp. (CF), has also acquired several regional carriers and a TL carrier and has established CF Forwarding for TL and intermodal freight. The company also has trucking firms in Canada, an export-import company, and an air freight forwarder. CFMF now has 555 terminals and 30 consolidation centers and has developed new marketing techniques, including discounts, contracts, electronic systems, and simplified tariffs to attract customers. CF's share of LTL freight tonnage, combining the LTL tonnage of CFMF and CF's regional LTL carrier, is now 9.26 percent of the LTL market. The CFMF operating ratio has improved from 94.5 in 1982 to 92.7 in 1984.

- A-P-A Transport Corporation is a New Jersey Teamster-organized company, operating principally between Baltimore and Boston, a high cost transportation corridor. A tightly managed medium-sized company (operating revenues $97.6 million in 1984), its operating ratios were 82.9 in 1982, 80.2 in 1983, and 79.8 in 1984.

- Pre-Fab Transit Company, an Illinois TL carrier, principally transporting building materials, has doubled its revenue in the last four years (from $28 million in 1980 to $56.9 million in 1984). The company's operating ratio has also improved, moving from 100.1 in 1980 to 97.7 in 1982, and to 95.4 in 1984. Steps to meet the challenge of deregulation and the recession included expansion from a regional to a nationwide market, switching from 40' to 48' trailers, and setting up an Employee Stock Ownership Plan (ESOP), which does not affect wages. The value of the stock depends on the success of the company; thus, every employee is involved in making the company profitable. Pre-Fab is also developing an LTL system to support its TL system.

- Jay Lines, Inc. of Texas, a small-to-medium sized general freight carrier, has achieved major growth as a result of the operating freedom granted under the MCA. Improved equipment utilization, careful cost accounting, data processing in every part of the company, training seminars, including training of owner-operators, and a team approach are some of the strategies this company has used. The company uses owner operators as well as its own drivers. Its operating ratio was 96.8 in 1980, 94.0 in 1982, and 92.5 in 1984.

- United Parcel Service Inc., incorporated as two separate subsidiaries in Ohio and in New York, has had no adverse effects from deregulation and, because of the nature of its small package business, has been insulated from the effects of the recession. With deregulation, UPS has been able to use the zone of rate freedom effectively, setting rates yearly that track costs better than the previous system was able to do. UPS has increased volume dramatically as shippers maintain reduced inventory with more frequent small shipments. As the increased work force has become more mature, and as terminal capacity was expanded to handle the increased volume, productivity has also improved. UPS' 100,000 union employees participate in a profit sharing plan, which has been very effective in stimulating productivity. UPS management (active and retired) owns the company.

Despite the increases in business failures it appears clear that many existing firms can operate extremely effectively in a deregulated atmosphere. Although unionized firms generally appear to have higher operating ratios than non-unionized firms, many unionized firms compete effectively for large volume business (Table 11).

Table 11
Operating Ratios and Revenues of a
Sampling of Successful Firms - 1984

	Operating Ratio	Operating Revenues (000 omitted)
Industry Average	95.9	
*Roadway Express	90.4	1,400,908
*Yellow Frieght System	94.8	1,344,334
*Consolidated Freightways	92.7	1,283,706
*Carolina Freight Carriers, Corp.	93.2	373,257
*A-P-A Transport Corp.	79.8	97,611
J.B. Hunt	75.4	97,945
Pre-Fab Transit	95.4	56,945
Overnite Transportation Company	85.8	58,984
Jay Lines	92.5	32,000
*New Penn Motor Express	83.7	65,746
*Red Star Express Lines	90.3	97,616
*Northwest Transport Service	86.6	82,811
*Holland Motor Express	89.0	91,065
Saia Motor Freight Lines	85.7	56,306
Southeastern Freight Lines	85.6	70,049
**United Parcel Service - Ohio	89.5	4,453,652
**United Parcel Service - New York	94.7	1,742,512

*Companies operating under the NMFA (Teamster carriers)

**UPS operates under its own national agreement with the Teamsters

Source: (6)

RETURN TO LABOR

The situation for labor in the trucking industry following the Motor Carrier Act of 1980 has been a mixed one. The 1979 employment peak in the trucking services industry of 1,407,000 employees was not reached again until 1983. Trucking and warehousing employment did expand vigorously in 1984 and 1985, however, reaching a total of 1,653,000 employees for 1985. Unemployment in trucking moved in parallel with the Nation as a whole, moving up from 1981 to 1982, and holding constant from 1982 to 1983. The unemployment data provide little indication that either employment levels or unemployment levels were particularly affected by trucking deregulation (Table 12). It should be noted that the employment levels shown in the table are an undercount by the number of owner operators. This number has increased rapidly since 1980, expanding by approximately 14,000.

While the number of those employed and unemployed may not be seriously affected by deregulation, it appears that wages have been more strongly affected. This trend began before the Motor Carrier Act of 1980 and followed the initial ICC deregulation efforts beginning in 1978 (Table 13). Average compensation for all employees in trucking fell from an index of 103 in 1977 to an index of 87 in 1981. Both union and non-union drivers and helpers did better than other trucking related employees such as warehouse workers. Union rates are represented in the table by the per hour indexes. (4, p. 38, Table 5)

Table 12
NUMBER OF PERSONS EMPLOYED AND UNEMPLOYED IN THE TRUCKING SERVICE INDUSTRY
AND
UNEMPLOYMENT RATES BY SELECTED SECTORS AND THE UNITED STATES
BY YEAR 1978-1985

			Unemployment Rate By Sector and Nation				
Year	Trucking Service Industry Employment (000)	Unemployment (000)	Trucking Service (percent)	Service Producing Industries* (percent)	Wholesale/ Retail Trade (percent)	Manufacturing (percent)	Nation (percent)
1978	1,343	63	4.5	5.7	6.9	5.4	6.1
1979	1,407	80	5.4	5.4	6.5	5.5	5.8
1980	1,346	121	8.2	6.1	7.4	8.3	7.1
1981	1,357	121	8.2	6.7	8.1	8.1	7.6
1982	1,360	161	10.6	8.1	10.0	12.1	9.7
1983	1,427	169	10.6	8.3	10.0	11.0	9.6
1984	1,587	138	8.0	6.7	8.0	7.4	7.5
1985	1,653	133	7.5	5.4	7.7	7.6	7.2

Source: (2, Appendix II)

Table 13
Employee Compensation, 1978-1982

	Indices of Rates and Compensation				
	1978	1979	1980	1981	1982
Average Compensation					
All employees	96	94	93	87	n.a.
Drivers and helpers					
per mile	109	105	105	106	n.a.
per hour	92	92	92	92	n.a.

Source: (4, p. 38, Table 5)

The downward pressure in wages following 1981 can only be partly attributed to deregulatory pressures. The extent of the down-turn experienced in 1981 and 1982 put clear wage pressure on many American manufacturing industries, including steel and metal working industries, other basic metal industries, and automobiles. The Teamsters Union, recognizing the general economic environment, recently negotiated a new three year National Master Freight Agreement (NMFA), retroactive to April 1, 1985. According to ICC Staff Report #10, dated March 1986,

> "The NFMA provides for higher wages, except that initial pay scales for new employees are lower for a three year period than for those previously employed and performing the same work. The Agreement strongly discourages the establishment of "double-breasted" operations and diversions of existing traffic from union to non-union operations. Work performed by teamsters under the NMFA which is diverted to any other plant, person, businesses, non-union employee, or other operation is grievable by the union. The employer then bears the burden of proof of non-violation of the NMFA. Expanded operations of a carrier that is a party to the NMFA, or any entity it controls automatically becomes party to the NMFA." (2)

Many trucking companies have negotiated separate agreements with the Teamsters. The highly profitable UPS Company negotiated a separate contract. Some carriers in financial difficulty have negotiated contracts with the Teamsters for Employee Stock Owners Plan (ESOP's) whereby employees become part owners of the firm in exchange for an agreement to accept lower wages.

Despite the Union attempts to maintain control or a dominant position with respect to large freight hauling operations, the Union has clearly been harmed by the expansion of the non-union sector of the industry. Approximately 80 to 90 percent of the large general freight bankruptcies were in firms with agreements with the Teamsters Union. Prior to the signing of the recently re-negotiated NMFA, Teamster employees received approximately $20 per hour in pay including fringes, compared to about $13 an hour for non-union workers. The wage differentials have had a clear impact on the way in which the industry has expanded since deregulation but union work rules have probably had an even stronger impact. Teamster rules relating to daily mileage limits for a driver; the loading and unloading of trucks; the limitations of drivers to handling specific specialized tasks; and the Teamster's insistence upon fixed, rather than stagged starting times that make it difficult to accommodate the uneven arrival times of freight, have all hindered adjustments by firms utilizing Teamster drivers. Recent surveys indicate that almost all expansion of employment in the trucking industry is occurring in the non-union portion of the industry. The fact that

the Teamsters Union has been willing to negotiate lower entry level wages for new hires, and the fact that the Union has signed a number of creative agreements which provide for wage adjustments through the introduction of ESOP's are encouraging from the standpoint of continuing union viability. However, the intense competitive pressure in the industry will continue to put pressure on the union to negotiate more flexible work rules. (2)

OVERALL EFFICIENCY IN AMERICAN TRUCKING

The question of efficiency in the American trucking industry has been touched on throughout this paper. Chart 3 for example, shows return on equity for large motor carrier companies. Chart 2 shows the ability of the companies to maintain effective operating ratios within the industry. Table 4 shows that trucking has been able to increase its share of overall American shipping revenues since the introduction of the Motor Carrier Act. Perhaps the acid test of efficiency, however, is the question of the prices paid by shippers in real terms (adjusted for inflation) for trucking transportation services. Using 1975 as an index year, a survey of shippers of both truckload and less than truckload shipments shows that prices have fallen significantly (Table 14). The price decreases on truckload shipments were most notable beginning in 1979. Less than truckload shipments fell in price most significantly beginning in 1981. For comparative purposes rail freight rates for a sample of shippers are also shown. Rail rates have fallen but not to the extent that trucking rates have fallen. The deregulation of the railroad industry with the Stagger's Act of 1980 has generally increased the capability of railroads to provide new and expanded services. The benefits do not appear to have been passed through to rail freight shippers in the form of lower rates. The trucking industry appears to have been able to provide both lower rates and expanded services to shippers. (4, p. 38)

Table 14
Real Trucking Rates, 1978-1982

	Indices of Rates and Compensation				
	1978	1979	1980	1981	1982
Actual Rates Paid by Shippers					
Truckload	99	95	88	81	75
Less-than-truckload	104	101	98	91	89
Rail	102	101	100	90	93

Source: (4, p. 38, Table 5)

The quality of service is also an important variable in the efficiency equation. Not only have prices for trucking services generally declined, but the quality of services has increased for a number of shippers (see Table 9 above). As noted earlier, the industry has generally moved away from a structure of relatively stable established rates set by rate bureaus, and moved to a situation where negotiated rates are more frequent and discounts from rate bureau prices or class rates are common.

The most startling way to perceive the total increase in efficiency in transportation following the deregulation of trucking and railroads in 1980, and of airlines in 1978 is to look at changes in post-deregulation gross national product and the post-deregulation U.S. freight bill (Table 15). In the five years from 1980 through 1984 gross national product increased 39.2 percent but the U.S. freight bill increased only 28.1 percent. Freight costs as a share of gross national product fell from 8 percent to 7.4 percent. New services, including "just-in-time" deliveries, overnight delivery services, and one or two day delivery of small parcels, assisted manufacturers, retailers and wholesalers in their attempts to minimize inventory costs. Inventory cost over the period fell from 18.4 percent to 14.9 percent of GNP. The improvements in trucking services came not only from the supply side, that is from competition among truckers and between truckers and other modes of transportation, but also from the demand side. Manufacturers, wholesalers and retailers were under severe pressure during the period from 1980 to 1984 to minimize inventory cost because of the high real interest rates experienced in the U.S. economy during that period. The combination of demand pressure and intense new competition on the supply side clearly forced the transportation industries, and in particular, trucking, to become more efficient and to provide a broader range of more precisely targeted services. (2, p. 3)

Table 15
Macroeconomic Changes: 1980-1984

Gross National Product	+ 39.2 percent
The U.S. Freight Bill	+ 28.1 percent
The Freight Bill, as a share of GNP	8.0 to 7.4 percent
Value of Inventory as a share of GNP	18.4 to 14.9 percent
U.S. Logistics Costs, as a share of GNP	14.2 to 11.6 percent

Source: (2, p. 3)

Following a long and honorable tradition, the deregulation of trucking at the federal level has been met by attempts at increased regulation on the part of some states with respect to intrastate trucking. Although some states such as Florida and Arizona have followed the federal lead by totally deregulating intrastate shipments, other states such as Texas have continued to impose strict controls on intrastate shipments and on shipments which enter the state for transshipment within the state. Texas, operating with rules established by the Texas Railroad Commission, a "mini ICC" is generally considered to have the strictest rules on intrastate transportation. Given the large dimensions of the state of Texas, it may be appropriate for the state to extensively regulate intrastate transactions, but it is clear that there are inefficiencies being forced on Texas shippers because of the extent of state regulations. A recent major court ruling, for example, instructed the state of Texas that it could no longer restrict United Parcel Service shipments entering Texas from other states.

The federal government recently proposed the Transportation Deregulation Act of 1985 (TDA) and has forwarded the bill to the U.S. Congress. Among other provisions the act calls for the prevention of state "encroachment" in areas where the federal government has deregulated trucking transportation. The provisions of the law are designed to prevent state attempts at regulating only interstate trucking transportation, but it is clear that the federal government is encouraging states to follow the federal lead in total deregulation of intrastate shipments. Over forty states currently regulate intrastate motor carrier operations to some degree. The legislation also calls for the study of state regulatory effects on trucking to determine whether those regulations create a burden on interstate commerce. The TDA is carefully written to specify that no changes in Federal regulation will supercede state safety regulations. (3)

HOW COMPLETE WAS DEREGULATION?

The Motor Carrier Act of 1980 extensively deregulated interstate trucking transportation. However, some remnants of the initial ICC regulation were left in place. Perhaps the largest of these remaining burdens is the continuing requirement to register all proposed rates with the ICC, and undergo a waiting period while the rates are published. Secretary Elizabeth Hanford Doyle of the Department of Transportation recently testified before the U.S. Congress (September 27, 1985):

"Since the ICC almost never rejects a proposed rate, carriers can charge whatever rates they and their customers agree to. However all rates of motor common carriers must be submitted to the ICC for approval, and such rates still require a brief period of advance notice before they can go into effect. Consider the absurdity of the statutory tariff filing requirements, which still yield a harvest of over a million tariffs annually. Tariffs must be filed for "cucumbers processed into pickles by the ordinary means," while "cucumbers, salt cured" are exempted. Citrus fruits sections that are chilled or semi-frozen are of no interest to the ICC, but if they are frozen, you violate the law if you fail to record the rates in Washington. This simply does not make any sense." (3)

In addition to having to register tariffs with the ICC, trucking transportation firms are still required to apply to the ICC for operating authority in order to enter the interstate trucking industry or to expand into new markets. Under the TDA, this requirement would be removed but carriers would continue to be required to meet Federal safety and financial responsibility standards in order to engage in interstate trucking operations. As noted by the Secretary of Transportation in her testimony of September 27, 1985, "few entry applications are even contested, and fewer still rejected by the ICC. This regulation serves no useful purpose and costs the industry million of dollars." One by-product of elimination of ICC operating authority regulation would be to ease the way for expansion of for-hire trucking services provided by independent owner/operators. These very small operators would generally like to expand their operations but are often prevented from doing so because they lack the time, expertise, or inclination to file the necessary paperwork with the ICC.

The Trucking Deregulation Act of 1985 also calls for the elimination of antitrust immunity for collective rate making. Antitrust immunity was partially removed from trucking in the Motor Carrier Act of 1980, but numerous motor carrier rate making activities are still subject to antitrust immunity. Recent evidence from the states of Florida and Arizona, where economic regulation of intrastate trucking has been eliminated indicates that rates would rise more slowly after removal of antitrust immunity. The Motor Carrier Rate Making Study Commission, a Federally authorized commission, found that collective rate making keeps rates higher than they would otherwise be, does not prevent unjust discrimination, and does not guarantee either rate uniformity or tariff simplicity. (3)

"SAFETY AS AN ISSUE"

The question of adequate safety as an issue remains open with respect to trucking transportation. Reports of trucking accidents and fatalities involving large trucks have risen sharply in recent years. Experts on highway safety disagree on the extent to which deregulation has contributed to the higher accident rates. Most experts agree that truck safety is a serious problem even if they don't agree on the precise meaning of Federal statistics. Most accidents appear to be caused by faulty equipment, overloaded vehicles, and inadequately trained or exhausted drivers. Nationally, accidents involving heavy trucks rose 14 percent in 1984 to 36,854. Deaths related to trucking accidents also increased from 4,821 in 1980 to 4,908 in 1984. The number of trucks on the nations highways may have contributed to the increased accident rate. Large tractor trailors have increased from 1,023,000 in 1977 to 1,259,500 in 1984, a 23.1 percent increase. The Bureau of Motor Carrier Safety of the Department of Transportation, however, indicates that accident rates for large trucks are not much higher than five years earlier. The number of accidents per million miles has remained relatively constant between 1.1 and 1.2 accidents per million miles of travel. (9)

All parties, including industry analysts, truck drivers and federal officials agree that driver fatigue, overloading of trucks, and lack of maintenance are the key contributing factors to the accident rate. Some commentators argue that all three of these causes have been exacerbated by the deregulation introduced by the Motor Carrier Act. However, there are no studies which provide any definitive proof regarding these allegations. It is difficult to conceive of a theoretical argument which would imply that these problems were made worse in a deregulated setting than they were in the prior regulated setting. Media exposes of truck overloading and driver fatigue were common as far back as the 1920s and 1930s. There is no question, however, that truck safety continues to be a problem requiring additional study, and perhaps additional resources to produce generalized improvements. (9) The Secretary of Transportation, in her testimony of September 27, 1985 made it clear that the Federal government would continue to enforce vigorously all safety requirements currently applicable to the trucking industry. The Trucking Deregulation Act of 1985 carefully delineates that the proposed Federal legislation would not interfere in any way with the rights of the states to regulate safety. Members of the Congress, in both the House and Senate, have also introduced legislation to improve trucking safety. (3)

"WHO'S HAPPY NOW"

The title of an American love song is an appropriate title for a summary section. Trucking deregulation has not made everyone happy. Few pieces of complex social legislation succeed in making "everyone" happy. However, it seems fairly clear that the majority of users of regulated trucking transportation are happier following passage of the Motor Carrier Act of 1980. A recent survey by the National Federal of Independent Businesses, an organization with over 500,000 small business members indicates that trucking is not a problem for its constituents. Of seventy-five problem areas cited by small businesses, adequacy of trucking transportation ranked 69th, and less than 2 percent of the respondents indicated that it was a serious problem. It seems fair to conclude that shippers are generally very pleased with the results of trucking deregulation.

Employees within the trucking industry probably have mixed feelings about the general effectiveness of deregulation. Employment has expanded since deregulation, and the relative importance of the role of trucking in the total transportation picture has increased. But the Teamsters Union has clearly seen its monopoly power in the area of regulated trucking employment decrease, and many of its members must now accept lower wages or less valuable wage and fringe benefit packages. Nonunion drivers, helpers, and other trucking or warehousing related employees may have more neutral feelings about the effect of deregulation. Many of these nonunion employees may relate their job opportunities to the existence of a deregulated atmosphere. The 15,000 or more new trucking firms belonging to owner/operators reflect another group of probable former employees who are pleased with the new opportunities that have opened up following deregulation.

Owners of trucking firms also probably have mixed feelings regarding the efficacy of the Motor Carrier Act. The Act has opened great opportunities for expansion, but the expansion is not accomplished at zero cost. Many firms have seized the opportunities available to them, and through careful management, have a greatly expanded revenues, routes, and profits. Other firms have attempted to expand and found that it was easy to move beyond their management capability. The firms who were relatively poorly managed prior to deregulation were put under intense competitive pressure after deregulation. Many of these firms were not able to meet the competitive pressure, and either went bankrupt or were taken over by other more efficient companies. Failures rates in the industry, although rising, still represent no more than one or two percent of total industry population per year. Rates of return on equity have generally paralleled rates of return in other manufacturing industries, and it appears that deregulation has not completely overwhelmed the owners and managers of trucking firms. (2), (6)

The last group of American citizens interested in the outcome of trucking deregulation is the population at large. Their concern flows to ultimate efficiency in the trucking industry and the contribution of that efficiency to an improved standard of living or improved capabilities on the part of the entire economy. Robert V. Delaney in a lecture at Ohio State University on April 4, 1985 has estimated that U.S. logistics costs as a share of GNP dropped from 14.2 percent of GNP to 11.6 percent of GNP. Said another way, U.S. logistics costs would have been approximately $95 billion higher in 1984 if they represented the same share of GNP as in 1980. This $95 billion decrease in relative share is a measure of the overall efficiency gain to the economy through improved transportation, including trucking transportation, and improved inventory management practices. Professor Delaney speculates that trucking deregulation may have accounted for as much as $56 billion of this gain. Other estimates project smaller savings on the order of $30 billion per year. Ignoring the actual numbers, the range of estimates provides an indication of the large increase in total welfare brought about by trucking deregulation. The American people are not "sorry now" regarding the effects of such deregulation. (2, p. 3)

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CREATIVITY, INNOVATION AND ENTREPRENEURSHIP SYMPOSIUM

Workshop on Ownership of Ideas and Information
May 29, 1986
Peter Marx, Esq.

1. Trade-off to encourage creativity, innovation and entrepreneurship

   a. free flow of ideas and information
   b. protecting private property rights

2. Opinions about trade-off are often determined by perspective.

   a. established company owner or manager
   b. employee
   c. consultant
   d. entrepreneur
   e. government official
   f. academic

3. Legal framework.

   a. patent

      - costly
      - can be strong protection

   b. copyright

      - inexpensive
      - covers form of expression, not underlying ideas

   c. trade secret

      - inexpensive but difficult to maintain

- factors

    - o extent known outside of business
    - o extent known by employees
    - o precautionary measures taken to protect
    - o value of information to company and competitors
    - o effort and money spent to develop
    - o ease or difficulty for others to independently develop
    - o defendant's conduct

d. laws on theft, copying or destruction of information

- varies state to state
- electronic information issues
- protecting proprietary information from corporate espionage v. stifling competition

e. contract

- maximum flexibility

f. vacuum

- most common

4. Joint venture and other contractual relationships

- pre-contract exchange of information
- post termination

5. Employees

a. general rules

- can take knowledge how to do job
- company owns technology developed on the job

b. before leaving

- conversations
- documents

c. variations

- off hours on premises
- company computer at home
- outside scope of job

d. non-compete agreements

- enforceable in most states if reasonable

- damages, preliminary injunctions, lawsuits and legal costs

6. Long term licenses of information with companies that go bankrupt

7. Submitting information to government agencies

   a. Freedom of Information Act

   b. Government as a competitor

8. Examples of ownership problems

   a. How they were resolved

   b. How they could have been prevented

"CONTRACTING OUT" - STIMULANT TO SMALL BUSINESS EMPLOYMENT GROWTH?

William C. Dunkelberg, Purdue University
William J. Dennis, Jr., NFIB
Institute for Enterprise Advancement

Over the last decade, and particularly the last five years, competitive forces have compelled many firms to extensively streamline and restructure their operations. Over the same period, political forces highlighted by California's Proposition 13, have compelled many governments to follow course. Large heterogeneous organizations as a result have began to extensively contract outside their organizations for services formerly provided "in-house."

Measuring the degree to which "contracting-out" has shifted job generation away from large organizations to service organizations, many of which are small businesses, is a complex but useful area of inquiry. Not only does such inquiry serve to quantify the extent to which small businesses benefit from the rationalization of large organization operations, but it suggests the speed and the extent to which these efforts are being made. Moreover, such inquiry develops evidence on the degree to which the United States is shifting from a manufacturing to a service-based economy. Each of these areas possess enormous economic, social, and public policy ramifications.

A useful method to examine the extent to which services have been contracted out is to develop the relationship between service employment (excluding government, wholesale, retail, and transportation/communications) and final consumer demand for services. Assuming no change in service sector productivity, a specified increase in consumer spending for services (constant dollars) should result in a proportional increase in service employment. If service employment increases relatively more rapidly than consumer expenditures for services increases, a relative increase in demand for services by business and government must exist. Arguably, this "new" demand for services would not be "new" demand at all. It would simply be the transfer of services previously conducted "in-house" to firms specifically classified as service businesses. Thus, any size estimate of changes in contracting-out can be made by comparing projected service employment with actual service employment. Though none of this analysis directly addresses the contracting-out of services from large organizations to small businesses, there is little doubt that

large organizations are increasing their service contract activities and that the service sector is dominated by small firms.

An Empirical Test

A simple regression is used to quantify the relationship between service employment and consumer final spending for services. This regression is estimated below, covering the 20 quarters between 1971 and 1975. The five year period in the early 1970's was selected because it represented a period in which contracting-out for services was not yet wide-spread, or at least not comparatively so.

$$\text{SERVICE EMPLOYMENT} = \underset{(.431)}{-2.225} + \underset{(.0013)}{.045} * \text{SERVICE EXPENDITURES}$$
$$R^2 = .99$$

The regression's fit is excellent. There is a near perfect relationship between service employment and consumer spending on services over the period. The predicted values (from the regression) and the actual values, as well as the average absolute error (difference between the two) are exhibited on Table 1; their relationship is illustrated on Chart 1.

With the relationship quantified, the next step was to use the relationship to project service employment from 1976 to 1984. The result of this projection is also exhibited on Table 1 and illustrated in Chart 1. Note, the equation establishing the relationship between service employment and consumer spending on services predicts service sector employment exceptionally well through 1978. The average absolute error between predicted and actual service employment is even lower for the 1976-1978 period than for the 1971-1975 estimation period. At that point (1979), however, actual service sector employment begins to diverge from that projected by consumer spending on final services.

Service employment is consistently under-predicted over the 1979-1984 period, and by relatively large amounts. The average absolute error between predicted and actual service employment is .59, seven times that of the 1971-1978 period. In fact, by the fourth quarter, 1984, the error translates into nearly one million service jobs.

Results and Discussion

The results suggest that since 1979, about 800,000 (1984) so-called "service" jobs have been created to serve customers other than "consumers". Many of these jobs represent the transfer of "service" functions for business from "in house" status to "contracting-out." Unfortunately, these data do not tell us where employment shifts occur. While we assume most are transfers of service functions in manufacturing firms and governmental units to service functions in private service firms, that is not necessarily true. Large retail and service firms, e.g. commercial banks or

Chart 1
PREDICTED AND ACTUAL SERVICE EMPLOYMENT

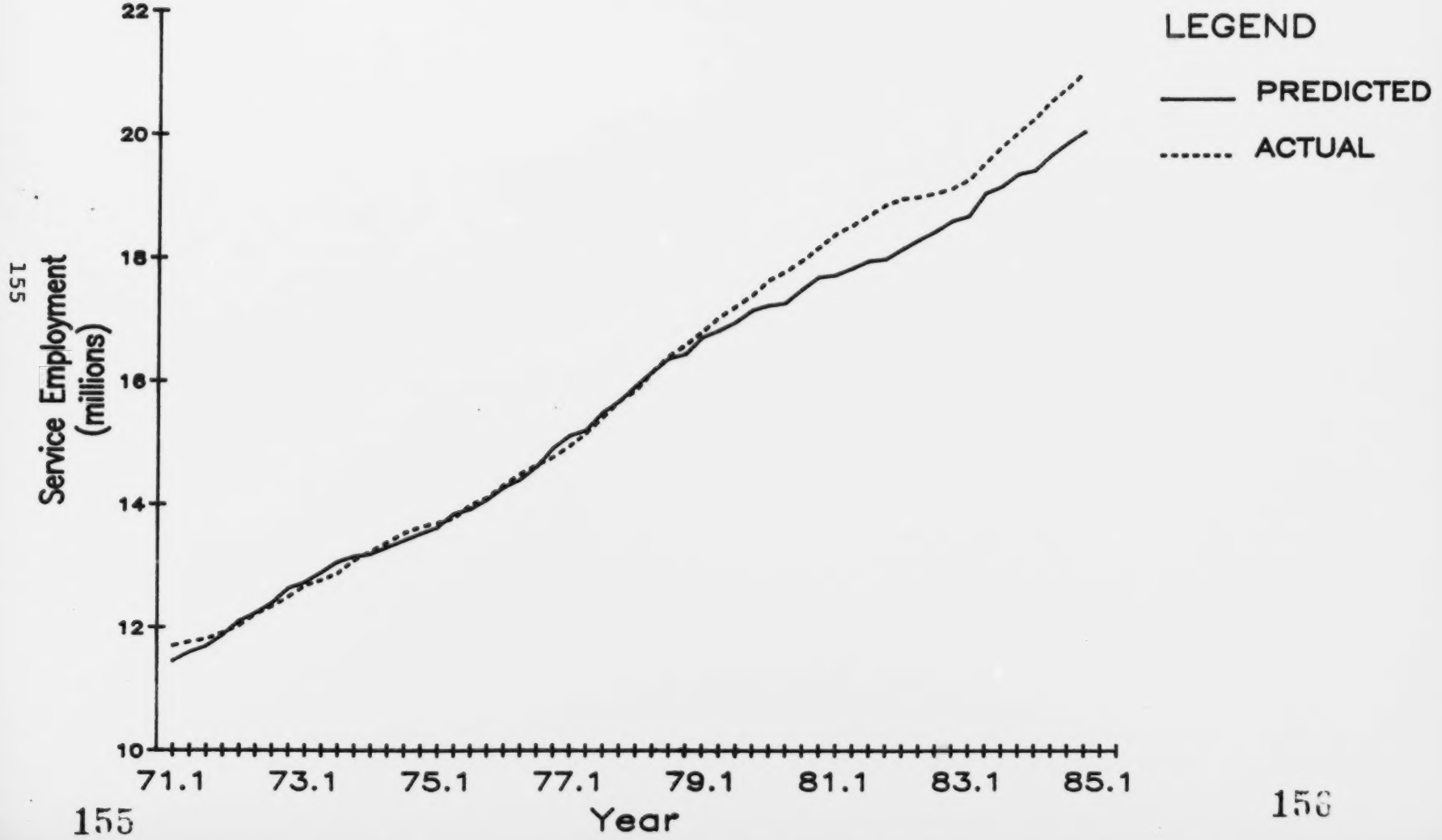

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TABLE 1

SERVICE DEMAND AND EMPLOYMENT
1971 TO 1984

DATE	PREDICTED	ACTUAL	ACTUAL-PREDICTED
1971:1	11.46	11.70	.24
2	11.60	11.76	.16
3	11.70	11.81	.11
4	11.88	11.91	.03
1972:1	12.11	12.03	-.08
2	12.24	12.22	-.02
3	12.40	12.34	-.06
4	12.64	12.50	-.14
1973:1	12.74	12.68	-.06
2	12.90	12.77	-.13
3	13.07	12.88	-.19
4	13.16	13.09	-.07
1974:1	13.20	13.23	.03
2	13.31	13.38	.07
3	13.42	13.53	.11
4	13.53	13.63	.10
1975:1	13.63	13.69	.06
2	13.85	13.78	-.07
3	13.93	13.99	.06
4	14.08	14.10	.02
1976:1	14.28	14.31	.03
2	14.41	14.49	.08
3	14.62	14.64	.02
4	14.92	14.77	-.15
1977:1	15.12	14.95	-.17
2	15.21	15.16	-.05
3	15.50	15.42	-.08
4	15.68	15.68	.00
1978:1	15.93	15.85	-.08
2	16.16	16.15	-.01
3	16.38	16.41	.03
4	16.45	16.59	.14
1979:1	16.72	16.80	.08
2	16.83	17.04	.21
3	16.97	17.21	.24
4	17.16	17.40	.24
1980:1	17.24	17.64	.40
2	17.28	17.78	.50
3	17.50	17.96	.46
4	17.70	18.18	.48
1981:1	17.73	18.39	.66
2	17.84	18.53	.69
3	17.96	18.69	.73
4	17.99	18.86	.87

1982:1	18.15	18.96	.81
2	18.30	18.99	.69
3	18.44	19.05	.61
4	18.61	19.13	.52
1983:1	18.69	19.27	.58
2	19.06	19.54	.48
3	19.17	19.81	.64
4	19.37	20.04	.67
1984:1	19.43	20.27	.84
2	19.68	20.56	.88
3	19.88	20.77	.89
4	20.06	21.03	.97

Average Absolute Error	1971 to 1978:	.08
	1971 to 1975:	.09
	1976 to 1978:	.07
	1979 to 1984:	.59

hotels, may also be contracting-out for services with greater frequency. Thus, it is difficult from our data to gauge the impact of contracting out on any industry, let alone firm size.

Despite the difficulties locating and measuring service employment transfers between firm sizes and among industries, the results do provide some evidence regarding the impact of large firm contracting-out activities on small business job generation. Between 1980 and 1982, the United States created approximately a million net new jobs. The Small Business Administration (SBA) estimated the small firm share of the growth to be 223%. Small businesses took on more employees than national net growth meaning large firms actually lost employees. Our estimates indicate that the service employee transfer over the period amounted to 200,000 jobs (see Chart 1). As a result, even if every service job transfer orginated in a large manufacturing firm and ended in a small service firm, the number of net new jobs attributed to small business would have only increased its share by just over 10%. While that adjustment would change the small business job generation statistics, it would not alter the small business job generation theme.

A second implication of our results is that employment in manufacturing is not declining in the manner some would suggest. A portion of the decline in manufacturing jobs is only a statistical anomoly, a reclassification of service jobs previously assigned manufacturing to service jobs now assigned services. The data provides no means to estimate the number of jobs which have been merely reclassified. However, it is arguable that a significant percentage of the total has been affected in this manner.

The aggregate estimate of a somewhat less than one million job transfer would of course need revision should the principal assumption--zero productivity in the services--require change. (If productivity in the service sector is positive, the transfer would be greater than suggested. If productivity is negative, the transfer would be less.) However, the assumption is not unreasonable, and therefore, is employed.

Conclusion

This brief paper estimates that between 800,000 and one million service jobs have been transferred from non-service organizations to service firms between 1979 and 1984. The data do not indicate either the firm size or sector (other than non-service) transferring these service jobs nor the size of the firm absorbing them. However, the transfer in some instances is merely a reclassification of service jobs in manufacturing firms to service jobs in service firms, indicating that the recent loss of employment in manufacturing is to some extent exaggerated. Moreover, the transfer of jobs -- even if all moved from large firms to small ones -- alters only the relative percentage of small business jobs created, but not the thesis that small business is the nation's job generator.

SOME THOUGHTS ON GAINING CREATIVE CONTRIBUTIONS IN ORGANIZATIONS

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ABSTRACT

The elements of creativity are critical to effective competition in today's business world. They underlie many of the productive contributions aggressively sought in many business operations. Seven considerations are identified as options to favorably influence the climate of the organization and to directly promote the creative thinking that produces the desired contributions.

INTRODUCTION

Many years ago, U.S. corporations periodically sought greater creativity mostly in their research and design functions, less frequently in publicity and marketing and only occasionally in other areas of business operations. That was a period when American business leadership in the world seemed unassailable.

Since then, however, the U.S. leadership situation has changed substantially. In many industries--consumer electronics, automobiles and textiles as glaring examples--foreign competition has gained considerably. The technological foundations upon which rapid-growth industries are built are being replaced by new ones such as biotechnology. This leaves much of American industry heavily locked into the more mature fields, with large investments in people and capital. At the same time the comparative advantage of various factors of production in some basic industries have shifted so that they favor a number of foreign competitors.

As a result of these changes, American business firms have been exploring new dimensions in management practices, strategies and approaches. Concepts such as quality circles, Japanese management, industrial renaissance, organizational renewal, enlightened teamwork, "skunk works", intrapreneurship, corporate venturing, innovation emphasis, corporate culture and entrepreneurial attitude--have become the buzzwords of today. Moreover, the targets of such thinking now encompass the entire organization and are not confined only to the design, research, marketing and publicity functions.

Increasingly, managers and supervisors in every functional area of business are being challenged to balance more traditional leadership responsibilities with actions that invite more intensive participation and greater contribution to the organization. Such contributions flow from a deep commitment by individuals to improving the primary functions of each organizational element. Not only are internal product champions and entrepreneurial risk-takers sought but also desired is a constant flow of all kinds of quality improvement and cost-cutting measures from the general workforce.

Regardless of the form of expression desired or the technique that is in vogue at the time, virtually every "new" approach is based heavily on the ability to blend divergent and convergent thinking patterns more productively. These are fundamental elements of all creative outputs. Creative expressions obviously are not monolithic. Creativity is measured by formal research in several dimensions and certainly the general public attributes it to others in an even broader array of perceived actions or outcomes.

BUSINESS CREATIVITY

Within the business world, a person may be considered "creative" by engaging in any of four somewhat overlapping sets of activities:

Problem/Opportunity Identifiers

Some persons are especially gifted in this set of activities by personality and inclination. They come up with new perspectives on customers, products and various processes and problems. Many times they are known as, "the one who will give you a different point of view". For this reason, some "bosses" can't stand them and others love them. When they are pursuing this kind of activity, "Identifiers" may ask strange questions or seek specialized data. Although they are very sure about their conclusions, some have difficulty getting the impact of their message across to management. Part of this is because their view is different and may challenge long-established assumptions. It may take time for the "new" concept to be recognized, researched or accepted by others. In other cases, the potential or value of the "new" viewpoint is immediately recognized and acted upon. This type of thinking can lead to changes such as the Procter and Gamble decision regarding PAMPERS advertising. When the main thrust of the advertising was the convenience for Mom, not much happened. When the emphasis was changed to stress the idea that PAMPERS keeps babies dry and happy, sales took off.

Creators/Solvers

This is the more traditional area of creativity that most people refer to as the important, creative actions of business--particularly when the outcomes include new products easily recognized across the general community. Much attention is given to the person(s) and circumstances leading to the birth of the idea. What is not often appreciated is the multitude of subsequent actions and factors that govern the translation of the idea into a commercially-available product or service. The new low-calorie sweetner that put Searle, a pharmaceudical company, into the food business; the "Workmate" series of Black and Decker, or even Ruth Wakefield's shopping bag with a square bottom that stands on its own, are examples that would not have occurred without overcoming many hurdles on the way to consumer availability. Also included here are the multitudes of operating problems small and large, for which unique and workable solutions/improvements are found totally without external recognition, but which are critical to long-term operating viability in competitive industries.

Outcome Enhancers

These creative individuals are extremely well-tuned to their surrounding environment. They use their imaginations to add a "flair" of some type to any proposal whether it is an internal system to control the quality of counseling for the elderly poor, or a different approach to marketing a product. They make new approaches more acceptable to others in or out of the organization. Usually they are well-respected for making things work, but sometimes their contributions are overlooked or undervalued. They are absolutely outstanding at corporate staff levels in decentralized or geographically dispersed organizations; anywhere influence is sought among groups with high discretionary freedom. They are the types who put polkas into aerobics, Dr. Ruth with Dr. Pepper, and in general, they put enthusiasm to work in otherwise mundane activities.

Knowledge Experts

If there is an art to marketing, management, finance, engineering or corporate development planning, these are the folks whose full and comfortable familiarity with a specific discipline enable them to achieve clear results with apparant ease. Much is based on their insight, analysis and projections of the potential impacts of certain acts under consideration. Since these thinking processes frequently occur within their heads, little external evidence of the process is visible. Their results seem to be creative because they are sound, direct and at the core of the situation. For example, a new CEO turns a troubled company into a profitable enterprise. The results may seem to be dramatic and creative to others. According to the CEO, however, every action taken was both logical according to the circumstances and based on prior experience. Therefore they were not particularly creative. It is the total effect that makes the difference. The total effect is made up of choices of actions by the CEO among the many possible;--where the CEO places the emphasis and the resulting pattern of actions selected. In a way, this is similar to the artist's selection of colors for a painting or a writer's selection of characters for a story plot. Also, how each act by the CEO was executed has similarity to how the artist's paint was applied to the canvas or how the characters were described for the reader by the writer. It is the total result, built on an array of skills and experience, that is the creative accomplishment. Would anyone deny Lee Iacocca's creative success with Chrysler?

ORGANIZATION CLIMATE

Since the fundamental elements of creativity underlie most of the kinds of activities sought in the business world today, what should command the attention of managers who want to insure that "people contributions" are better utilized? To answer that question, one cannot avoid dealing with the organizational climate. This is not a new concept but it is important. It includes such aspects, for example, as setting appropriate expectations, providing support, tolerating differences, specifying idea review procedures, and recognizing individuals. Obviously there is an interlock with traditional managerial functions such as leadership practices, with emphasis on some of the more sophisticated skills. Getting the climate right is as imaginatively challenging as the results sought by it.

No two organizations have the same cultural dimensions. Organizations differ in their history, governance, basic functions to be performed, available resources, and most critically, in the external worlds they face. One could wonder, for example, how an outstandingly unique and successful dairy store independently-run, would be operated within a 40 store chain even if the entire chain was managed by the current store owner. Such an exercize does not seem useful. Each organization must deal with its own set of influences, start with its current situation and follow the path that emerges.

Regardless of such individuality, there are some considerations that have worked well in a number of firms over many years. They illustrate actions managers have used to build a climate that invites the deeper commitment of creative contributions. Seven of them are listed with no significance to the order of presentation:

Get Some Creativity Training And Much Practice:

Training and practice improve performance. Certain kinds of creative outputs respond particularly well to the use of a variety of techniques which can be learned. It helps to raise expectations, instill confidence and show how anyone can get better results with creative approaches. The results of the training tend to compliment the climate of the organization as long as other positive elements also are present.

Give Them a Problem--Sometimes:

The desired goal is to have a competent person fascinated with a problem that is important to the organization. The challenge is to entice individual curiosity and interest in the goals sought by the organization. Sometimes problems are best "given" by management as long as care is used in framing the question and parameters so that they are not overly restrictive. At other times the areas of exploration will come from the interested person. In these cases, friendly joint consideration works well as a tentative response. Generally a competent person who wants something to work is the best bet to actually get the result.

Leave Some Slack When The Climate Warrents:

All managers like to run a tight ship. When the squeeze for production results is excessive, however, nothing else is possible. Once the attitudes and expectations are favorable for the deeper, creative commitment, allowing some slack resources encourages the informal checking of possibilities to see if they should be proposed as "official" projects. On the other hand, rushing into a 15% released time policy just because the 3M company makes it work is not generally advisable. Few companies have the internal climate and process mechanisms that 3M has developed over many years. Resources should not be "too loose". Requiring the proponents to "hustle" a bit to try the next steps seems to aid commitment to worthy projects.

Use Groups To Get Cross-fertilization:

The use of persons with diverse backgrounds and different disciplines in problem-solving groups stimulates idea generation among all involved. More important are the basic problem-processing patterns of those involved, the leadership provided and the group dynamics that emerge. The effective use of groups by management is often one of the weakest areas of leadership competence. Where groups have been used properly, the results are consistently productive.

Keep The Pressure For Results Light To Moderate:

Excessive pressure interferes with the processes that produce the best results. It hinders creativity. On the other hand, no pressure encourages wandering or disinterest, unless the nature of the group is such that it developes its own member commitment.

Information Exchange Pays Off:

For individuals and groups with responsibilities that are more regularly dependent upon creative insights (research, engineering, marketing, planning, or any major project as examples), diverse informational inputs are critical. Exploration beyond one's normal range of exposure spurs new viewpoints about familiar situations. The goal is to break traditional thought patterns especially regarding uses, processes, procedures, and assumptions. Much of the exposure should be informal, oral and interactive with competent people from many backgrounds (including customers and suppliers at times). A side advantage is in the contacts formed. Information is fleeting at times but people remember and recontact those whose thoughts were perceived to be useful.

Expect Incubation Results:

Sparkling insights will occur during routine activities following intense involvement with a problem. Most of the insights pop into conscious recognition and then disappear rapidly. Once lost, they seldom can be recalled. Arrangements should be made to capture such insights at the moment of their occurance. Often they are more productive than any of the conscious efforts to obtain new insights. The trigger, however, is deep immersion in the siutation so that all aspects are internalized.

CONCLUSION

Some of the foregoing considerations are difficult to use; some easy. Not one is sufficient alone; nor should any be totally ignored without a considered decision. Obviously the art of managing required selection of which to use and how to make each one effective in the organization involved. They are merely considerations to achieve a larger purpose.

In the final analysis, few formal organizations are interested in all-out creativity. Some creativity usually is considered useful. Not always is it seen as the primary vehicle to obtain other desired contributions to the organization; contributions that can't be ordered nor wished into being. That situation may be changing, however, as the demands of business today force a broader look at methods that work, and recognition of the fundamentals replaces the "fads" of application.

An organizational climate that supports individual creativity, including the considerations described in this paper will impact many aspects of business firm's operations. Included are strategy formulation, the development of the company's distinctive competence, and a strong customer orientation; three key aspects of all companies small and large. The ultimate results reflect the unique circumstances of each firm.

When Avis Corporation chose to be positioned and recognized as number two (We Try Harder!) in the relatively static car rental industry, it chose a strategy ideally suited to its situation. Such a strategy would not work in a fast-changing industry where products, markets, competition and technology move constantly. That means the older, standard approaches to positioning may be more useful to one company than another. Strategies for turbulent industries require thought processes more fully grounded in the elements of creativity. Even in the more static industries, however, creative approaches can yield substantial gains. Arm & Hammer's pitch for boxes of baking soda as freshners for refrigerators is basically a creative move. Now it has been enhanced by the addition of a space on the box to write in the date for its replacement.

America fundamentally remains the bastion for business success and will surge again in the world because the national posture is more conducive to creative thought. Recently Forbes magazine listed the 400 richest people in America. Of these, 40% (165) built their fortunes without any significant inheritance. Last year saw more new corporations established than any previous year on record. The basis for U.S. resurgence world-wide may be founded on new technologies or new marketing directions. It certainly will be founded on the creativity of its population. Organizations that act to support and use those creative outputs more effectively will have an advantage.

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THE RISKS & REWARDS

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ABSTRACT

Entrepreneurship education is a logical component of vocational education programs in the high schools and 2-year colleges. The benefits of teaching this new curriculum go far beyond developing skills for successful business start-ups. Entrepreneurship education is seen as an educational motivator, a career goal builder, and a small business productivity issue for enhancing the outcomes of all types of vocational education programs.

SUCCESS TELLS THE STORY

Vocational educators are finding that young graduates, now turned entrepreneur, tell the story best.

Julie Bourdo started the Toledo River Cruise Lines when she was 21. Six years later she serves approximately 150,000 passengers per year and grosses $2,650,000. As a distributive education major in high school she learned the basics of sales, marketing, competition and advertising. She says she is a success if she can make 99.9% of her customers happy.

Vince Ghiloni is a general contractor who started his business at the age of 19 when he was laid off from his job with a custom builder. He hires only graduates of vocational schools because he knows from his own high school experience that the vocational building trade programs put out well-trained workers. He believes that the training he received put him four to five years ahead of someone with only general high school education.

Mirone Derrell Washington started his business as a fashion design consultant when he was just 18. He used the experience he gained in his high school fabrics and fashion class plus the business classes to get started. He says the thorough knowledge of the necessary technical skills plus a desire to achieve makes it possible to succeed. His life style provides the freedom he wishes to increase or decrease his workload and do his best.

Jodee Kulp used her training in graphic arts and commercial art to develop a high-quality, full service graphic arts studio with creative in-house production capabilities. She credits her vocational instructors who urged her to push her talents to their fullest potential. She says that she believes an entrepreneur must be willing to give more than she expects from others.

These are only a few of the stories we have collected about more than 100 young entrepreneurs who used their vocational training as a springboard to start their businesses. They tell us that the rewards far outweigh the risks they are taking at such a young age. But the risks loom large for them all with such a high failure rate in new small businesses.

THE ROLE OF EDUCATION

Entrepreneurship Education is a growing answer to the risks so many entrepreneurs face. If we can begin to teach young people how to run a business successfully we hope to be able to encourage more business startups and consequently develop more jobs. And we expect that the failure rate caused by ignorance of small business management concepts will greatly decrease.

It is no wonder that "education and training" is one of 11 major topics of the White House Conference on Small Business. Committees around the nation have been discussing the needs for public education to better prepare the entrepreneurs of the future.

The National Center for Research in Vocational Education has designed a lifelong learning model to explain the differences in entrepreneurship education for each of five different stages of development. The first three stages represent education before students have any real plans to start a business. The last two stages represent training for adults who are ready to start their own enterprise or are already in business and are struggling.

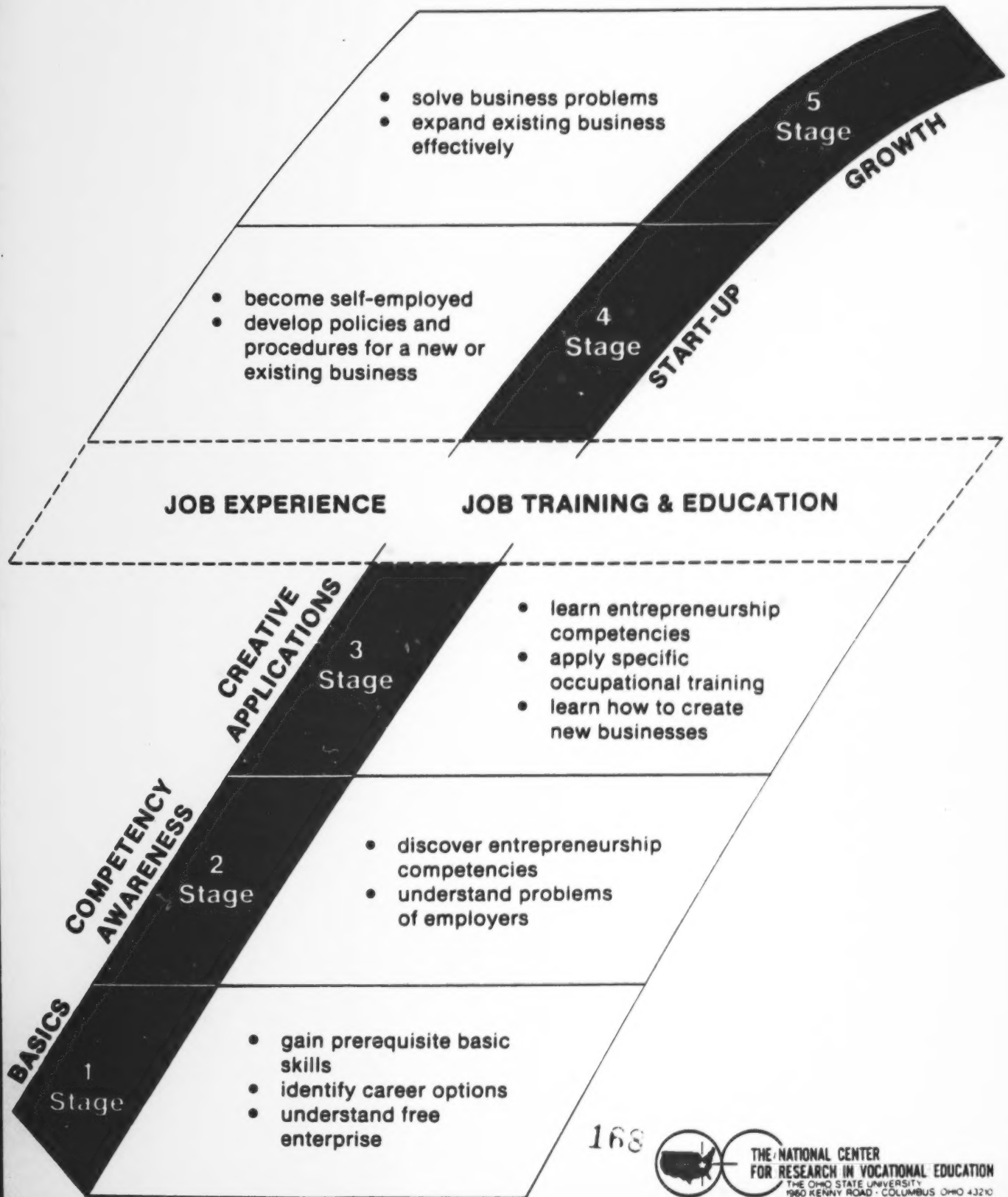
Stage 1 targets the education system as early as kindergarten to encourage building the basic foundations for a career as an entrepreneur. Activities include learning about the free enterprise system and meeting entrepreneurial role models.

Stage 2 is designed to begin teaching the basic management skills a person will need to learn to be successful in business. It is particularly appropriate for high school vocational students because it will help them understand the problems of their employers even if they never start a business.

Stage 3 provides more in-depth knowledge of the competencies needed by an entrepreneur. It allows vocational students to apply the technical skills they are learning to a possible business idea. And most importantly, it gives students a chance to dream up a business they could start in the future...to be freely creative and to dream a bit.

Stages 4 and 5 are the types of training already provided by the SBA and others. They are for specific businesses and specific problems. If future entrepreneurs depend only on these last two stages they will have much less expertise to carry them through the inevitable problems of business.

LIFELONG ENTREPRENEURSHIP EDUCATION MODEL



THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
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A NEW APPROACH FOR THE HIGH SCHOOL

Many vocational educators are moving ahead to add entrepreneurship to their curriculum. Ohio has developed an exciting new product called THE RISKS & REWARDS OF ENTREPRENEURSHIP. This 2-3 week classroom curriculum introduces high school vocational students to the opportunities and problems of entrepreneurship.

The four units allow students to answer the questions...

Can I Be an Entrepreneur?

- What do you know about yourself?
- What do we know about entrepreneurs?
- How are you like entrepreneurs?
- How does entrepreneurship affect lifestyle?
- What are your life-style preferences?
- Are your preferences compatible with becoming an entrepreneur?
- How can entrepreneurial career planning help you?
- Did you know? (Facts about entrepreneurship).
- Do you know yourself better than before?

What Experiences Have I Had?

- What is experience?
- What types of aptitudes might you have?
- What are your interests?
- What knowledge is important to an entrepreneur?
- What skills will I need as an entrepreneur?
- How does an entrepreneur gain expertise?
- Can you choose a career goal?

What Type of Business Could I Start?

- What is a business idea?
- Where do you get your business idea?
- What business ideas can you think of related to using your vocational training?
- How can interests, skills, and hobbie's lead to a business idea?
- What business might you start someday?
- Why should you know about your community?
- How large is your community?
- Why should you know about the people?
- Why should you know about competition?
- Why should you know about changes in your community?

How Can I Prepare to be My Own Boss?

- How do entrepreneurs view risk?
- Is becoming an entrepreneur too risky?
- Why worry about decisions?
- How do you make your decisions?
- Why are goals important?
- How do you reach your goals?
- Why should you begin to build resources?
- What types of resources should you begin to build?
- Who are the contacts?
- What do you need to be prepared to do?
- Where can an entrepreneur go for assistance?

In addition to the student module there is an instructor guide and two posters featuring vocational graduates who are now entrepreneurs. The instructor guide includes teaching outlines, handouts, transparency originals, profiles for each student to fill out and keep for future use, and success stories of the 10 entrepreneurs on the posters.

This new career decision curriculum project is being used in Ohio this year and will be available nationally in 1987.

DEVELOPING EXPERTISE VIA EXPERIENCE

Beyond thinking of entrepreneurship as a future career, we can also begin to help students develop skills in marketing, sales, record keeping, financing and planning. Vocational programs are teaching these skills as they also teach the job-specific technical skills of carpentry, electronics, fashion design, graphic arts, or computer programming. At this level, small projects provide experience in using business skills. Schools offer opportunities for school-based businesses, learning experiences with community role models, and business simulations within their special industry area.

We have defined the basic small business competencies that should be learned in an educational setting as follows:

A.	Understanding the Nature of Small Business	Level 1.	Define the role of small business in the U.S. economy.
		Level 2.	Analyze factors that contribute to small business success.

B.	Determining Your Potential as an Entrepreneur	Level 1.	Identify the personal characteristics of entrepreneurs.
		Level 2.	Evaluate your potential for starting a business.
C.	Developing the Business Plan	Level 1.	Describe the contents of a business plan
		Level 2.	Recognize the importances of a well-designed business plan.
D.	Obtaining Technical Assistance	Level 1.	Recognize the importance of obtaining technical assistance.
		Level 2.	Determine the types of technical assistance needed by a new business
E.	Choosing the Type Ownership	Level 1.	Describe advantages and disadvantages of business ownership types.
		Level 2.	Analyze factors influencing choice of ownership type.
F.	Planning the Marketing Strategy	Level 1.	Explain the importance of marketing activities for business success.
		Level 2.	Define the components and purpose of a marketing plan.
G.	Locating the Business	Level 1.	Examine the factors for selecting a good business site.
		Level 2.	Outline the steps for selecting the correct business site.
H.	Financing the Business	Level 1.	Recognize factors to consider in obtaining finances for a new business.
		Level 2.	Determine information needed to obtain financing from different sources.

I.	Dealing with Legal Issues	Level 1.	Explain uses of contracts in small business.
		Level 2.	Define legal issues encountered by entrepreneurs
J.	Complying with Government Regulations	Level 1.	Explain how the different types of legislation affect and protect small business.
		Level 2.	Determine government regulations, licenses, and permits affecting small business start-up.
K.	Managing the Business	Level 1.	Recognize the importance of sound management techniques to business success.
		Level 2.	Identify specific management techniques used by entrepreneurs.
L.	Managing Human Resources	Level 1.	Explain the responsibilities involved in managing human resources
		Level 2.	Identify techniques that may be used to manage human resources.
M.	Promoting the Business	Level 1.	Describe methods of promotion used by small business.
		Level 2.	Analyze techniques and cost factors in small business promotional planning.
N.	Managing Sales Efforts	Level 1.	Outline what successful sales people need to know in a small business.
		Level 2.	Analyze selling strategies appropriate to your type of business.
O.	Keeping the Business Records	Level 1.	Describe the components of a sound record keeping system.
		Level 2.	Identify the type of financial data obtained from business records.

P.	Managing the Finances	Level 1.	Identify the various financial statements and ratios used by businesses to manage finances.
		Level 2.	Describe the components of various financial statements and how they are constructed.
Q.	Managing Customer Credit and Collections	Level 1.	Explain factors to consider in small business credit and collections.
		Level 2.	Describe the management of customer credit and collections.
R.	Protecting the Business	Level 1.	Identify the types of risks faced by entrepreneurs.
		Level 2.	Describe precautions to take against threats to the business.

Source: PACE (Program for Acquiring Competency in Entrepreneurship Education)

The levels indicate the differences in a beginner's entrepreneurship curriculum and a more advanced educational opportunity.

EDUCATION FOR CHANGE

What are the risks and rewards for vocational educators for whom this is a new idea and a major new direction? Many agree with Peter Drucker who says that this country's economy can only stay ahead of the rest of the world if we become an entrepreneurial society--seeking, learning about and supporting innovation and creativity.

It is not enough to learn how to do a task as it has always been done. We must also learn about the options for doing it better. And then we must learn to create new applications that have not even been thought of yet.

Teachers in general might have a tough time keeping up with all the changes in the world. But vocational teachers have an advantage. They can zero-in on the specific technology of their industry and apply it to the commercial opportunities for that industry in the future.

The entrepreneurial spirit built this nation. It deserves to be nurtured so that we can continue to see change as a positive opportunity--not an insurmountable problem.

After all, a turtle only moves ahead by sticking out its neck.

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CAN FRANCHISING SURVIVE

Franchising is a method of business expansion implemented by growing businesses who find it difficult to satisfy the demands of a prospering business. Therefore, the growing business, known as the franchisor, turns to independent business men and women, known as the franchisees who are willing to spend the time and money necessary to establish a business outlet. In return, the franchisees follow a prescribed, proven business method and ultimately promote the expanding business as well as share in the prosperity known to the franchisor.

Contrary to what many people think, franchising is not an industry, but a system or method of conducting business. If one decided to purchase a franchise, one would become an owner/operator of the franchise and would be responsible for sales, earnings, and the day to day operations of the business. One would be his or her own boss, but at the same time one would have the benefit of aligning him or herself with a proven money-making operation. The degree of success one would have in the business would depend on one's drive, ambition, managerial abilities, and the skills one would use to operate the franchise.

The pursuit of the American dream of owning one's own business through the franchising route is as valid today, if not more so, than it ever was. The idea of franchising is not really that new, however. The division of a territory and the paying of royalty may have started when the first Chinese rickshaw driver was assigned a territory. Another possibility for it's origin would be at the time when Louis IV granted counties to nobility who in turn paid him a royalty that was collected from the population.

The modern version of franchising did originate in the United States when the Singer Sewing Machine Company offered a franchise in 1863 (Feinstein, p.30). In 1898 General Motors received wide-spread recognition by introducing franchised outlets. In 1899 Coca-Cola sold its first franchise in Chattanooga (Rathburn, p. 82). Presently, franchising has made a considerable contribution to the American Economy (1985 U.S. Industrial Outlook). There are currently more than 2,000 companies that employ this expantionary method and that are responsible for more than 462,000 franchised outlets. In 1984 it was expected that sales attributable to franchises would exceed $464 billion, more than one-third of all retail sales (Agins, p.33), today this sales ratio has been achieved.

There are nearly 2,000 franchisors in this country, there are obviously some franchisors being added to the list as well as

some being dropped. The franchisors and the franchisees are business people and as such, there is a risk for each. The franchisee wants a little bit of control, but not total control. It is not expected that all will be successful. In 1980 about 3 percent of the franchisors failed (Rathburn, p. 84). With proper investigation and open eyes, buying a franchise is safer today than it has ever been. The rule is still "let the buyer beware, especially in this fast growing industry" states Hotch (p. 37). The best advice appears to be to analyze yourself--your finances--your time--and your franchisor. "Going into business is risky, going in o a franchised business with a parent company holding your hand, can lower the risk considerably" (White, p. 30). Although purchasing a franchise is expensive, "Most people who buy a franchise have hocked everything they own" (White, p. 31), the potential of success is great.

The 1950's have set the pace for franchising in the United States. McDonald's, and many of today's giants were off to a great start. Americans had the entrapreneural spirit. America had the mass media of advertising. With the franchisor's name a household word, the franchising concept made great strides. Today the failure rate for independently owned businesses is dramatically high primarily because of poor management, however "Fewer than 10% of franchised units fail, primarily because they are supported by a network of experienced management professionals" (Feinstein p. 30).

Both parties establish what is known as a franchise agreement. This contractual relationship between the franchisor and franchisee is a legally binding document written in great detail and signed by both parties. This agreement becomes the nucleus of the relationship and addresses itself to virtually every aspect of franchising. The purpose of such agreements is to establish a mutually beneficial relationship by stating explicitly how the franchisee is to conduct business as well as to make known what the franchisor will provide in consideration thereof.

Once finalized, the agreement can virtually withstand all attempts of alteration, that is, to change topics set forth in the agreement or to introduce topics that had been neglected to be incorporarted into the agreement. Therefore, the need for careful negotiation is great as is the need to seek advice from professionals who are knowledgeable in areas of accounting, law, and in particular, franchising (Koach, p. 13).

The primary issues which need to be included into the agreement are numerous. Foremost, all costs that may be incurred should be known to the potential investor. The location and territory of the outlet should be clearly defined as well as where the responsibility lies in choosing and developing the site

and conducting the necessary market analysis. All claims made by the franchisor should be substiantiated in writing which will allow the franchisee to seek compensation if these claims are unmet or if they fail to materialize.

The terms of renewal and termination of the agreement are factors that deserve much consideration. A franchisee should reserve the right to renew the agreement if he or she chooses to do so and if the franchisor has no substantiated objections. All possible sources of objection by the franchisor should be clearly stated in the agreement. It is however, customary for the franchisor to reserve the right to repurchase the franchise or to restrict and require approval for the franchisee to sell or transfer the franchise to a third party.

Termination deals with how, when, and under what circumstances a franchisee may have to surrender the franchise. The clauses that govern the termination should also include what, if anything, the franchisee will receive if the agreement is terminated by the franchisor. The franchisee should propose that he or she be given ample consideration for the time and money invested in the business even in the event of failure. "Many states have enacted laws to protect franchise buyers: California, Florida, Hawaii, Illinois, Indiana, Maryland, Michigan, Minnesota, New York, North Dakota, Oregon, Rhode Island, South Dakota, Virginia, Washington and Wisconsis all require franchisors to register with a state reglulatory agency" (Rathburn, p. 85). The Federal Trade Commission in October, 1979 issued a rule to govern franchise sales offers made anywhere in the country. Approximately twenty states have so-called termination-nonrenewal laws. "Illinois legislators, ... are considering a bill to require franchisors to buy back inventory and equipment and also refund a substantial portion of advertising fees when they terminate or refuse to renew a franchisee's contract (Rathburn p. 83). It appears that regulations are becoming more and more complicated "You need an Indian guide to find your way through the maze of regulations" (Hotch p. 38).

Another means of protection is the franchise consultant. This person can serve as a consultant for either the franchisee or the franchisor, however hopefully not at the same time.

Still another growing means of protection is the "...franchise advisory council made up of franchisee representatives elected by their peers" (Rathburn p. 85)... This council provides a means to settle problems that may develop between the two parties. In the same category is the International Franchise Association that sets forth a code of ethics principally addressing the obligations of the franchisor to the franchisee to insure fair business practices between the two parties. Along with the FTC, the International Franchise Association tends to govern the concept of franchising.

Most discussions concerning franchises now tend to exclude product franchises such as the familiar automobile dealers, soft drink bottlers and gasoline service stations. The primary reason for this is that our nation has changed from a product oriented society to that of a service oriented society. Consumers generally have more money to spend (ie. two incomes) and a lack of time. The desires of our modern generation is to have convenience, consistent quality and fast service. Fast foods have always been able to satisfy the consumer in all three categories.

The trend we are seeing in the automobile area is indeed interesting. American consumers are keeping their cars longer. This fact means that first, there is still a demand for repair service and second, there is a growing do-it-yourself segment. This apparently is working out rather well for franchisors in the automotive repair areas, especially in the specialized areas as mufflers, transmission, rust proofing, waxing, paint protection, sun roofs, alarms, radar detection, brakes etc. The franchisers must compete with the home repair buff as well as other professionals in their area by offering these services at a rate low enough to be competitive.

Great efforts are being made to encourage women and minorities into the franchise world. "This trend will usher into the franchise arena new markets, new products and a largely untapped management pool" states John Naisbitt (Whittemore, p. 47). The Bureau of Labor Statistics reports that between 1974 and 1984 the number of self-employed women skyrocketed 74 percent to 2.4 million. "Only 6.5 percent of all franchises are owned solely by women..., and another 31 percent of franchises are owned jointly by a husband and wife..." (Leff, p. 76). Women find that "Often it's easier to start a franchise in more traditional female fields that have lower franchise fees and start-up costs" (Leff, p.77). Areas such as diet, cleaning, dresses, cosmetics and maid service easily come to mind. Any potential franchisee and particularly women and minorties find "It is slightly easier to obtain financing for a franchise than for a traditional business..." (Leff, p. 77), the reason for this is that financial institutions have something to look at, a track record that can be substiantiated.

This trend is definitely changing and help from many areas is available to not only assist but to encourage women and minorities. Most franchisors will help finance the franchisee, "Bert Cohen, Vice President of Licensing for McDonald's, declared there was an 'explosion in minority franchising activity' sweeping the country" (Dent, p. 71). McDonald's, Burger King, Baskin Robbins, Kentucky Fried Chicken, Computer Land and the 7-11 stores are all taking steps to encourage minorities. Kentucky Fried Chicken has a special minority program calling for $30,000 instead of the normal $125,000 in liquid assets. McDonald's has an agreement with the NAACP which calls for 100

more stores to go to minorities by 1989. The 7-11 stores plan for 23 percent of all new stores to go to minorities by 1988 (Dent, p. 71).

There are many new trends developing in our society and one of the more important results of a new business trend is the new types of franchises. "New, smaller franchise opportunities are popping up all the time. A couple of hundred have come along every year for the last five, and the pace shows no signs of slowing" (White, P. 30), now one can obtain a franchise for flavored popcorn in such varieties as strawberry and banana.

As stated earlier, the service oriented franchise appears to be the trend for the future, "Fast-food firms are still growing, but the biggest growth is in services" (Rathburn, p. 83). This also appears to be the most profitable area. According to Rathburn (p. 83):

> Success in service franchising--or any franchising--requires four basics:
> 1) A competent franchisor.
> 2) A service with widespread consumer demand.
> 3) A better way of meeting that demand.
> and 4) An enthusiastic response from qualified entrepreneurs who want to get in on the action.

Competition in franchising will represent yet another trend to be discussed. This competition can be looked upon from several fronts. First of all, the franchisor is competing against other franchisors, ie. McDonalds vs Burger King or Dunkin Donuts vs Mr. Donut. In order to maintain their market share franchisors are forced to diversify as a partial solution. We now see the famous hamburger franchises also offering chicken and fish and even breakfasts along with their traditional lunch and dinner. The donut franchises are now selling cookies and ice cream. A second solution for the apparent competition is to start doing business in foreigh countries, this approach is quite successful for such fast-food franchises as McDonalds and Kentucky Fried Chicken.

By using some of the trends mentioned already, it becomes a little easier to project into the future. One must keep in mind some of the major developments in our society such as: 1) We are now a service oriented society. 2) We can expect more and more legal restrictions. 3) We are beginning to see fewer but larger businesses. Now a closer look at franchising seems to be in order.

The service trend of our country is closely followed by a trend for more service oriented franchises. We have already seen a specializing franchising for the auto industry, we have muffler specialists, brake specialist, transmission specialists. The future fast foods franchises will be specialized in other areas besides hamburgers. Mexican and Chinese franchises are becoming available. This same type of trend will become more and more

popular in the medical service area. Specialists in dentistry, optometry, dermatology, and private duty nursing are beginning to become more common. An article by Margery Eagan called "The McDentists" shows that "...they are theatening an established profession of independent small business people..." (Eagan, p. 145). These dental franchises such as Omnidentix and Smiles have "The tremendous overhead costs at malls..." (Eagan, p. 167). The recently graduated dentist probably is in debt $70,000 to $100,000 and now needs another loan for about $100,000 to set up his practice. "It's a rare bank that will lend $100,000 to a graduate already $100,000 in debt" (Eagan, p. 169). The young dentist will probably end up working for a salary and a percentage of the fee and earn about $20,000 a year which with his bills would prevent him or her from saving enough to open a practice. Although there is a tremendous overhead cost at a mall, the mall location is convenient, open longer hours, may have specialists at hand, in short, it is more cost effective and convenient for patients. Partially due to the 1977 Supreme Court ruling that made it legal for professionals to advertise, it will become common place to see medical malls in many communities. These medical malls would have doctors, dentists, optometrists and anyone necessary to take care of our medical problems.

"The worst thing that traditional dentists have to say about McDentists is that centers ... which are run by business people, may be more likely to put profits ahead of patient care" (Egan, p. 167). Is is felt by most that in order to maintain professional credibility, patient care must receive high attention.

More laws and regulations along with other means of control can be expected. "There's an enormous amount of fly-by-nighters coming into this business" (Russell, p. 38). The controls are not only for the fly-by-nighters but also because of the growing size of the franchise organizations. These controls imply a potential loss of contact between franchisor and franchisee as well as added expense. "To have an experienced law firm prepare offering circulars, for instance, now costs about $30,000." (Rathburn, p.85).

The fast food franchises, particularly the burger giants, are attempting to head off potential government regulations which may require ingredient listing. Both Burger King and McDonalds are starting to list ingredients for their products and almost all the others such as Roy Rogers, Wendy's, Arby's, and Kentucky Fried Chicken will at least have the information available should a customer ask. It appears logical that as the size of the fast food franchisors increases, it becomes relatively easy to impose rules and restrictions upon them as a group, it seems illogical for the government to impose label restrictions for Joe's or Mary' hamburger stand.

Size will undoubtedly take its toll when it comes to large

corporations taking over successful franchisors. This will become more common primarily because of the laws making franchising a truly respectable business, and also because the franchisor has been around long enough to have a track record. This makes the acquisition by our major corporations a very likely future trend.

As size increases, the loss of contact may be compensated for with the modern use of computer electronics. The U. S. Electronics Group, Inc. of Aurora, Colorado uses electronic mail for their consumer electronics stores. They have developed a daily electronic bulletin board which keeps the franchisee informed as to price changes, new product additions, personnel shifts and special deals from manufacturers. "The total cost to the franchisee is $4,000 plus long distance telephone costs and the company saves several thousand dollars per month by eliminating printing, mailing and labor costs" (Kreisman, p. 102). This type of computer use may also solve a growing future problem and that is"... that channel satisfaction is strongly related to channel climate" (Schul, p. 32). Undoubtedly the businesses in the future will be dominated by fewer and fewer major companies.

Projections and Future Study

The trends in our society will have a direct effect on franchising, wether favorable or unfavorable, only time and more indepth study will tell. The trend toward more and more regulation seems to be endless. In order to sell a hamburger, the seller must comply with some 200 federal, state and local laws or restrictions. As of July 1, 1986 McDonalds will have ingredient labels on their products in the state of New York and "Burger King has voluntarily decided to make ingredient information available in its outlets all over the United States" (Burros, p. 29). If this is an example of the power and complexity of regulations today, what will the future hold? Will government regulations eventually have a negative impact similar to the cost doctors have to pay in Massachusetts for mal practice insurance? Will regulations drive out businesses that are unable to keep pace with changes?

The trend toward fewer and larger companies is another trend for concern. Here again no one will know for sure if this is a favorable or unfavorable trend. "Franchising alternately has been hailed as the salvation of small business and condemned for causing half the towns in America to look like the other half" (Leff, p. 74). It is true that franchising is a salvation for small businesses yet the franchisor not only is getting larger but larger corporations are purchasing franchisors. For example the Southland Corporation owns the 7-eleven franchise, Ralston Purina owns Jack in the Box and General Foods owns the

Burger Chef franchise. Not only will food franchises, rental car franchises and hotel/motel franchises be the same in America but the same colors and designs and logos will also be the same the world over, the golden arches are almost as common in Canada, Japan and in Britain as in the United States. Will our society be governed by only a few super sized companies?

Even though there is some talk about a shake-out the only franchise in danger on this account is the home computer stores, all other franchises are expanding by offering more products and/or going into international areas. Will franchising in fast foods and other areas reach a saturation point?

Services are definiately growing especially in the home repair area. Banks are especially willing to loan money for repair because of the security of a building. Interest rates are currently low and the home repair franchises are cashing in.

It is not that franchisors have depleted their supply of white entrepreneurs to become franchisees, but most franchisors are making a concerted attempt to enlist women and minorities. This trend will not only continue but expand.

Franchising is currently in one of the most prosperous periods and the question remains as to how long the momentum will continue.

APPENDIX A

HOW TO FIND OUT MORE

1. Read up on franchising from government and other sources such as:

Franchise Opportunities Handbook, $13.50. A paperback listing of essential information on franchisors, including who to contact and cost of a franchise. Available at government bookstores or from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Franchising in the Economy, 1983-1985, $4.50. The Department of Commerce's statistics on the franchise industry. Also from the Government Printing Office (above).

International Franchise Association Directory of Membership, 1984-1986. IFA, 1025 Connecticut Ave., N.W., Suite 707, Washington, D.C. 20036 $3.95 paperback. If you ask, the IFA will refer you to advisers or consultants in various areas of franchising.

Is Franchising for You? $89.95. A series of six audio cassette learning tapes from Franchise Learning Center, Ltd., 20 Lottingtown Road, Glen Cove, N.Y. 11542.

Twenty-one Questions, $1.00. The most commonly asked questions about franchising. A 16-page booklet from the International Franchise Association, 1025 Connecticut Avenue, N.W., Suite 707, Washington, D.C. 20036.

The 1985 Franchise Annual Handbook and Directory, $22.95. A listing of franchisors and information about them; includes advice on investing. Info Press Inc., 728 Center Street, P.O. Box 550, Lewiston, N.Y. 14092.

Franchise Index/Profile: A Franchise Evaluation Process, C.R. Stigleman, Small Business Management Series No. 35, $2.50. A guide to questions you need to answer about a franchise before investing. Also from the Government Printing Office.

The Source Book of Franchising Opportunities, Robert E. Bond, $19.95. Another listing of franchisors from Dow-Jones-Irwin, 1818 Ridge Road, Homewood, Illinois 60430.

Franchise Investigation and Contact Negotiation, $3.95. Pilot Books, 103 Cooper Street, Babylon, N./Y. 11702.

2. Study a number of franchise offerings. Check things such as: franchisor experience, franchisor help, franchise territory, etc.

3. Obtain professional advice from accountants, lawyuers, consultants and perhaps even from an insurance agent.

4. Visit several franchises in operation and even consider working at one even at no pay.

5. If the particular franchise is for you work out the finances with the franchisor and the bank. Do NOT sign any thing you do not understand without consulting with your lawyer.

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The Commonwealth of Massachusetts

SPECIAL LEGISLATION COMMISSION
ON SMALL BUSINESS INCUBATORS

Rep. Frances F. Alexander
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Small Business Incubators and the Commission's Purpose

A small business incubator is an emerging concept in economic development policy designed to accelerate job creation by reducing the failure rate of small businesses. A small business incubator is a facility that provides new or existing businesses three important ingredients for success: (1) flexible low cost space; (2) pooled support services such as typing, copying, word processing and mailings on a fee basis and (3) management training and assistance.

Dunn and Bradstreet's analysis of business failures has demonstrated that one half of failed firms are in business less than five years, while one-third of failures are due to a lack of management experience or poorly balanced business experience. Furthermore, many new businesses are started by scientists or engineers who have a good prototype but lack a foundation in business management. By providing a fertile environment for new businesses that lowers overhead costs while teaching business skills that are necessary for long term success, a small business incubator can reduce business failures and increase job creation in the state. Moreover, an incubator can be part of a strategy to bring new jobs to high unemployment regions by attracting new businesses and influencing the location decisions of businesses when they leave the incubator.

Several states, cities, universities and companies have developed small business incubators in the past decade. Massachusetts, however, has little experience with this new economic development tool. Since small businesses and new business development are vital to Massachusetts' economic growth and the state has strong foundation of economic development agencies, a small business incubator program could play an important role in state economic development policy.

Commission Purpose. The Special Legislative Commission on Small Business Incubators is analyzing the feasibility of a small business incubator program in Massachusetts, identifying the potential roles for state government, local governments and local economic development agencies, universities and private firms in a program, and evaluating how to coordinate a program with existing state economic development programs and agencies. Based upon the research and analysis conducted by the commission, recommendations will be prepared on the design and implementation of a small business incubator program and legislation will be written to implement the Commission's recommendations.

Commission Workplan. There are four major components to the commission's work. First, the commission is reviewing the experience of existing small business incubator facilities, programs and policies. This phase includes a review of the academic and professional literature, a survey of existing incubators, and an analysis of state level policies and programs to encourage small business incubators.

A second part of the commission's work is a public input process to elicit the experience and knowledge of practitioners in local economic development agencies, small businesspeople, the financial community and state agencies. This process includes representation on the commission, meetings and discussions with experts and practicioners and a day long conference on May 22nd.

Based upon information accumulated in the first two phases, the commission will analyze the current capabilities, policies and programs in state agencies. This analysis will help determine existing resources and expertise that can be utilized to efficiently implement a state incubator policy.

The fourth and final stage of the Commission's work will be the development and recommendations for a Massachusetts incubator policy and program and legislation to implement the Commission's recommendations.

MAKING FINANCIAL PROJECTION FOR A BUSINESS PLAN

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ABSTRACT

The content of this presentation is concerned with the preparation of the financial components of a business plan utilizing the Venture Analyst software to prepare the plan. It covers the major components of the financial plan and provides terminology, examples and graphs to illustrate each area. The Value to be derived is accuracy, efficiency and ease of understanding the purpose and use of a business plan and the importance of the financial section.

INTRODUCTION

A Business Plan is in many instances still a labor intensive exercise that many small businesses fail to do or do well. However with the use of micro-computers and software like the Venture Analyst, much pain and guess work are removed.

The Venture Analyst provides for the financial analysis of a start-up business or the development of a new venture/product line etc. with ease. Additionally, the use of charts and graphs produced by the program provides a visual understanding of key ratios. The use of this tool is valuable to:

1. instructors in presenting financial analysis to business and finance students
2. to small business owners
3. to Accountants and Management consultants
4. to bank and other financial lending institutions
5. to project managers and company development and planning staff

The remainder of the presentation is devoted to providing an overview and explanation of the financial analysis/functions provided by the software. Included are a sample plan and key graphs and charts.

Small businesses sometimes do not recognize the importance of planning, however in todays complex environment, planning is a must. "Proper Planning Prevents Poor Performance", these are the 5 critical P's of planning. In business this could not be more true. While planning does not guarantee success, it increases the company's chances of survival and growth. The contrary is also true, lack of planning does not necessarily spell failure, but it increases the probabilities for it. Proper planning is no substitute for the entrepreneur's instincts and spirit of taking risks. However, planning helps assess the risks the entrepreneur is taking.

THE BUSINESS PLAN

Everyone is familiar with the phrase "A picture is worth a thousand words", and a business plan is no more than a picture of what your business would look like if goals and objectives are met within a specified period of time.

The preparation of a business plan is a major step in transforming a creative idea into a useful product or service for society. The business plan can be an internal document to set goals, define future actions and estimate the benefits to an entrepreneur or business.

Business planning has two dimensions: strategic and operational. Strategic planning deals with the future and is long term in nature. It focuses on the basic objectives or goals of the firm by defining what business the company is actually in, the kind of enterprise it is, and the plans for achieving stated goals and objectives. In essence, strategic planning deals with structural or fundamental issues.

Operational planning, on the other hand, is concerned with current performance. It deals with such matters as sales forecast, gross margins, operating expenses and cash flow projections".(1)

It is the operational planning section that is often overlooked by small businesses. Sometimes they do not have the staff to perform these tasks so it is ignored completely. This can lead to severe short-term cash shortages and financial setbacks, despite the company's long term profit potential. To avoid these setbacks, a series of forecast are needed, each compatible with the other but serving specific needs.

Many of these forecast techniques entail long and cumbersome manipulations of numbers that are very time consuming if performed manually. Entrepreneurs are also faced with changing variables that are necessary to implement a forecast, since planning is an on-going process. Todays technology has made the process much simpler and has taken the mystery off financial forecasting. Microcomputer spreadsheet software packages, such as THE VENTURE ANALYST, have added the flexibility to carry out every day financial and accounting operations such as analytical procedures, cost analysis and budgeting, cash flows, sensitivity and risk analysis.

In the process of preparing a business plan, certain major factors have to be identified. One of these factors is the evaluation of the competition. The potential market and strategy for market penetration should be defined. Other factors such as estimated timing to achieve goals, qualifications of the business team, and assessment of future events in quantitative form as financial projections must be defined for the development of a comprehensive business plan.

Once a creative idea is supported by attractive financial projections, and a carefully thought out strategy for market penetration, it can draw attention of necessary capital for commercialization of such an idea, from potential partners, bankers or venture capitalist.

Utilizing a base case scenario, used to create a business plan on the Venture Analyst, we will discuss some of the techniques necessary in preparing and interpreting financial projections.

THE BASE CASE SCENARIO

The first step is defining the base case -- the most likely scenario of future events. Tables I, II and III list many of the items which must be considered.

The **acquisition period** is the time for construction or development before the sale of a product or service. An **operating period** is chosen over which the financial projections are made. It might be the physical life of a manufacturing facility, the technology life of a process or the market life of a product.

Since projections are made into the future, **inflation rates** for revenue, cost of sales, expenses and other items are necessary. If high rates are selected, the enterprise will appear too attractive since the margin between revenue and costs will be widened unrealistically. But the absence of inflation can be misleading, too. Here is an example. The financial projections might use a prevailing interest rate for debt, like 12%. This rate is actually the inflation rate plus a margin for profit for the creditor. So an inflation rate of 4-6% would correctly portray economics. But a "no inflation" approach would not

reflect debt repayment in future years with inflated dollars. The projections show the equity participants' reward to be lower than would probably prevail.

Raw materials are stockpiled to permit smooth operation. Product inventory is built to assure prompt filling of orders. Perhaps, 30-day credit is extended to many clients to be competitive. Funds are required to finance these **current assets**. On the other hand, suppliers might extend credit to the enterprise. The payment of salaries is made two or three weeks after work is performed. These items which provide credit to the enterprise are **current Liabilities** . The difference between current assets and current liabilities is known as **working capital**. Working capital requirements are an important consideration in a business plan since infusion occurs even before sales begin and the investment grows due to inflation. Working capital is not depreciable and is recoverable if the business is scaled down or is closed.

Other investments which are not so liquid are termed **fixed capital**. Land, equipment and buildings are included. Some expenditures which are otherwise thought of as "expenses", such as salaries, are capitalized when associated with the development of in-house created fixed assets. Fixed capital is segregated by property class, so that proper depreciation can be computed in future time periods. Land is not depreciated.

Depreciation is the systematic allocation as an expense of a fixed asset over a period of time. It is not a true "expense" since no cash is spent. Often, two types of depreciation are claimed, one for book accounting and one for tax accounting.

An **ordinary tax rate** is necessary to compute taxes on ongoing operations. A **capital gain tax rate** is important if the sale of assets is a major consideration in the preparation of the business plan.

Revenue should be based on a detailed analyses of market and prices of competitive products and services. In addition to market forces, revenue may be limited by mechanical failures, staffing limitations or technology problems. Thus, financial projections often have low revenue in early periods, followed by rapid or moderate growth.

Ongoing expenditures are grouped into two categories. **Cost of Sales** items are directly associated with manufacturing a product or providing a service. Raw materials and production labor are examples. **Operating Expenses** are necessary, but not directly related to the product or service. Property tax or liability insurance fall into this category.

It is convenient to break cost of sales and operating expenses into variable and fixed sub-categories. The variable items change with sales revenue, like raw material cost. The fixed items are relatively insensitive to business activity, like property taxes. The variable items are then tied to sales revenue which might change from period-to-period due to market forces, reduction of production problems, growth of distribution channels, staff additions, etc. An **operating factor** is used to represent unit sales growth or other increases or decreases in business activity. With this approach financial projections reflect both changes in sales activity and attendant financial projections for a most likely scenario have been made.

A venture's merit is often judged by net present value (NPV). If so, a **discount rate** must be chosen for NPV computation. It can be the cost of funds or the desired return on investment. The results of the internal rate of return and other results may look attractive. However, prospective partners, bankers and venture capitalist will all pose "what if" questions to challenge the enterprise's economics. What happens if sales are below current projections, or if the product life cycle is shorter than expected? See chart "Greenway Leasing, LTD."

A **sensitivity analysis** determines the venture's financial performance as one variable rises above or falls below the base case value. If performance is judged by internal rate (IRR), sales revenue might be varied to see the effect on IRR. Then, cost of sales would be changed to see the effect on IRR; etc.

If a business plan is designed to seek debt financing, the sensitivity of cash coverage of debt would be determined against revenue, then against cost of sales, then against the product life cycle, etc. See figure 3 & 4.

Sensitivity analyses not only anticipate the questions which will be posed by those whose support is sought, but also indicates to the entrepreneur or business the variables which are crucial to financial success. If changes occur in the cost of sales to give sharp changes in the internal rate of return, then dedicate more resources to control, or, at least, to better define this item during venture development. If a sensitivity analysis indicates trouble if sales goals are not met, a detailed marketing study should be considered.

MONTE CARLO RISK ANALYSIS

An entrepreneur or business can often assign an accuracy to individual items. The cost of plant and equipment might be 15% less or 30% more than the contractor's estimate. The sales revenue may fall 20% above or below the base case goal, according to a marketing study. Raw material might be set by a long-term purchase agreement, so the cost-of sales accuracy is plus or minus 10%. And so forth.

A Monte Carlo analysis is a statistical projection of the probability of achieving various levels of venture performance base on the accuracies of economic information. First, a probability relationship is constructed from the low, base and high values of the variable. This is done for all major variables. Repetitive calculations of performance, like IRR, are made -- each done with variables selected from simple probability relations. The results of many random scenarios produce many IRR values, some high and some low, but most in the middle range. These are collated in decreasing order to produce a risk curve. It fairly represents the upside potential and down side risk, when the input accuracies are carefully chosen.

The risk curve is quite steep -- indicating large upside and down side potential -- if important variables have wide accuracies swings, like plus or minus 30%. As information is better defined through venture development, the accuracy ranges narrow. Land cost is fixed upon purchase. The cost estimate of plant and equipment is improved with more engineering. Thus, later risk curves become flatter, indicating less upside potential and down side risk. See chart "An Asymmetrical Distribution Curve".

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Table I

Base Case Information -- **Bold** indicates fill in spaces

Description	Value			
FIRST YEAR	**1986**			
ACQUISITION PERIOD	**2**	Years	1988	Initial Year
OPERATING PERIOD	**15**	Years	2002	Last Year
INFLATION RATE				
Revenue & Cost of Sales	**4.0%**	per Year	**4.0%**	per Year
Ongoing & Unusual Expense	**4.0%**	per Year	**4.0%**	per Year
Fixed & Working Capital	**4.0%**	per Year	**4.0%**	per Year
WORKING CAPITAL				
Current Assets				
Cash	**$750**	M		
Receivables	**$847**	M		
		$1,597	M	
Current Liabilities				
Payables	**$250**	M		
Note	**$50**	M		
		$300	M	
Working Capital		$1,297	M	
FIXED CAPITAL				
Category		Spending by Year		
Non-depreciable	**$3,500**	1986	100%	Non-deprec
3-Year Class	**$0**	1986	**40%**	Deprec
5-Year Class	**$6,200**	1987	**50%**	Deprec
10-Year Class	**$1,500**	1988	**10%**	Deprec
18-Year Class	**$0**	0	**0%**	Deprec
		0	**0%**	Deprec
	$11,200	0	**0%**	Deprec
		0	**0%**	Deprec
			100%	

DEPRECIATION	Tax Code	Tax Years	Book Code	Book Years
3-Year Class	**0**	**5**	**1**	**5**
5-Year Class	**0**	**12**	**1**	**12**
10-Year Class	**0**	**20**	**1**	**20**
18-Year Class	**0**	**25**	**1**	**25**

0: ACRS 3: **200%** Declining-balance/Str-line
1: Straight-line 4: **20%** Diminishing-balance
2: Sum-of-years-digits

DISPOSITION OF ASSETS AT END-OF-VENTURE			
Non-depreciable Assets	**1** Code	$5,785 M	Sales Price
		$2,285 M	Gain (Loss)
Depreciable Assets	**0** Code	$0 M	Sales Price
		$0 M	Gain (Loss)
0: Disposed at zero value.		2003	Sale Year
1: Disposed at cost &	**3.0%** per year appreciation.		
ORDINARY & CAPITAL GAIN TAX	**46%** Rate	**28%**	Rate
INVESTMENT TAX CREDIT	**8%** Rate	0%	Cost Reduct
DISCOUNT RATE FOR NPV	**15%** per Year		

Table 1

Base Case Information -- **Bold** indicates fill in spaces

Description		Value	
REVENUE			
Widgets		**$2,250**	M per Yr
Replacement Parts		**$1,750**	M per Yr
Consulting Assistance		**$900**	M per Yr
Custom Manufacturing		**$250**	M per Yr
		$5,150	M per Yr
VARIABLE COST OF SALES			
Raw Materials		**$760**	M per Yr
Electricity @ $0.07/KWH		**$460**	M per Yr
Natural Gas		**$370**	M per Yr
Production Labor		**$320**	M per Yr
		$1,910	M per Yr
FIXED COST OF SALES			
Advertising		**$160**	M per Yr
Fixed Royalty		**$125**	M per Yr
Sales Staff		**$75**	M per Yr
. . . . .		**$0**	M per Yr
		$360	M per Yr
VARIABLE EXPENSES			
Research @ 2% Sales		**$103**	M per Yr
Market Development		**$75**	M per Yr
Field Support		**$25**	M per Yr
Corporate Overhead		**$37**	M per Yr
		$240	M per Yr
FIXED EXPENSES			
Liability Insurance		**$50**	M per Yr
Property Insurance		**$13**	M per Yr
Property Tax		**$194**	M per Yr
. . . . .		**$0**	M per Yr
		$257	M per Yr
UNUSUAL EXPENSE BY YEAR			
Feasibility Study	**1986**	**$500**	M
. . . . .	**0**	**$0**	M
. . . . .	**0**	**$0**	M
. . . . .	**0**	**$0**	M
. . . . .	**0**	**$0**	M
		$500	M

Tax Treatment **2** Code **1** Yr Account.
- 0: Expense all unusual expense items.
- 1: Deduct acquisition unusual expense over accounting period.
- 2: Deduct acquisition unusual expense per Section 189 of Code.

Book Treatment **1** Code **15** Yr Account.
- 0: Expense all unusual expense items.
- 1: Deduct acquisition unusual expense over accounting period.

Table III

Base Case Information -- **Bold** indicates fill in spaces

Description	Value			
FIXED CAPITAL LOAN				
Loan Ratio	**70%**	of Fixed Capital		
Total Ratio	53%	of Funds to Reach Operation		
Principal	$7,992	M		
Tax Treatment	**2**	Code	**1**	Yr Account.
0: Expense all loan interest/fees.				
1: Deduct acquisition fees/interest over accounting period.				
2: Deduct acquisition fees/interest per Sect 189 of Code.				
Book Treatment	**1**	Code	**15**	Yr Account.
0: Expense all loan interest/fees.				
1: Deduct acquisition fees/interest over accounting period.				
Interest Rate	**12.0%**	per Year	**1**	Payments per Year
Fee or Points	**3.0%**	of Loan		
Grace Period	**0**	Years		
Repayment Period	**15**	Years		
Amortization	**15**	Years		
WORKING CAPITAL LOAN				
Loan Ratio	**60%**	of Working Capital		
Total Ratio	6%	of Funds to Reach Operation		
Principal	$841	M		
Interest	**10.5%**	per Year		
Terms	**1**	Code		
0: Draw at startup only. 1: Draw at startup & later years.				

ENTRIES DURING OPERATING PERIOD

During Year	Operating Factor	Additional Investment	Tax Deprec	Book Deprec	Tax
1988	**80%**	**$0**	**$0**	**$0**	**$0**
1989	**90%**	**$0**	**$0**	**$0**	**$0**
1990	**100%**	**$0**	**$0**	**$0**	**$0**
1991	**102%**	**$0**	**$0**	**$0**	**$0**
1992	**104%**	**$0**	**$0**	**$0**	**$0**
1993	**106%**	**$0**	**$0**	**$0**	**$0**
1994	**108%**	**$0**	**$0**	**$0**	**$0**
1995	**110%**	**$0**	**$0**	**$0**	**$0**
1996	**113%**	**$0**	**$0**	**$0**	**$0**
1997	**115%**	**$0**	**$0**	**$0**	**$0**
1998	**117%**	**$0**	**$0**	**$0**	**$0**
1999	**120%**	**$0**	**$0**	**$0**	**$0**
2000	**122%**	**$0**	**$0**	**$0**	**$0**
2001	**124%**	**$0**	**$0**	**$0**	**$0**
2002	**127%**	**$0**	**$0**	**$0**	**$0**
		$0	$0	$0	$0

THE VENTURE ANALYST™

Fort Bend Industrial Products

Earnings Statement, $ Thousands (Book Accounting Basis)

During Year	1986	1987	1988	1989	1990
REVENUE					
Product A	2,737	2,847	2,961	3,079	3,202
Product B	2,129	2,214	2,303	2,395	2,491
Support Services	1,095	1,139	1,184	1,232	1,281
Consulting Assistance	103	108	112	116	121
	6,065	6,308	6,560	6,822	7,095
COST OF SALES					
Electricity @ $0.07/KWH	(925)	(962)	(1,000)	(1,040)	(1,082)
Nat Gas @ $5.80/MCF	(681)	(709)	(737)	(766)	(797)
Raw Material	(815)	(848)	(882)	(917)	(954)
Production Labor	(389)	(405)	(421)	(438)	(455)
Advertising	(195)	(202)	(211)	(219)	(228)
Fixed Royalty	(152)	(158)	(164)	(171)	(178)
Sales Commissions	(91)	(95)	(99)	(103)	(107)
. . . . .	0	0	0	0	0
	(3,248)	(3,378)	(3,514)	(3,654)	(3,800)
GROSS EARNINGS	2,817	2,929	3,046	3,168	3,295
ONGOING EXPENSE					
Research @ 2% Sales	(121)	(126)	(131)	(136)	(142)
Market Development	(91)	(95)	(99)	(103)	(107)
Corporate Overhead	(30)	(32)	(33)	(34)	(36)
Field Support	(45)	(47)	(49)	(51)	(53)
Casualty Insurance	(61)	(63)	(66)	(68)	(71)
Property Insurance	(16)	(16)	(17)	(18)	(19)
Property Tax	(163)	(170)	(176)	(183)	(191)
. . . . .	0	0	0	0	0
	(528)	(549)	(571)	(594)	(617)
UNUSUAL EXPENSE	(78)	(78)	(78)	(78)	(78)
BOOK DEPRECIATION	(463)	(463)	(463)	(463)	(463)
OPERATING EARNINGS	1,748	1,840	1,935	2,034	2,137
LOAN FEES & INTEREST	(674)	(644)	(611)	(573)	(529)
PRETAX EARNINGS	1,074	1,196	1,324	1,462	1,608
NET TAX	(494)	(550)	(609)	(672)	(740)
AFTERTAX EARNINGS	580	646	715	789	868

THE VENTURE ANALYST™

Project 3762

Balance Sheet, $ Thousands (Book Accounting Basis)

End of Year	1986	1987	1988	1989	1990
ASSETS					
Cash	(0)	(0)	811	844	877
Inventory & Receivables	(0)	(0)	919	956	994
Current Assets	0	0	1,731	1,800	1,872
Property, Plant & Equip	3,400	6,260	6,855	6,855	6,855
Accumulated Depreciation	(0)	(0)	463	925	1,388
	3,400	6,260	6,392	5,930	5,467
Cap Expense Less Amort	1,121	1,728	1,555	1,382	1,210
	4,521	7,988	9,678	9,112	8,548
LIABILITIES					
Accounts Payable	(0)	(0)	(541)	(562)	(585)
Supplier's Note	(0)	(0)	(108)	(112)	(117)
Current Liabilities	0	0	649	675	702
Short-term Debt	0	174	845	897	953
Long-term Debt	2,210	3,895	4,086	3,864	3,613
Deferred Income Tax	32	36	119	317	499
	2,242	4,105	5,698	5,753	5,767
EQUITY	2,279	3,883	3,979	3,359	2,781
Liabilities & Equity	4,521	7,988	9,678	9,112	8,548

Figure 1

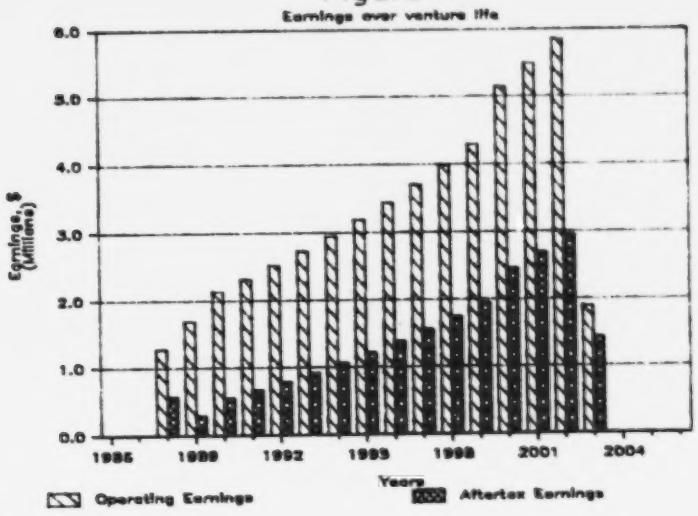
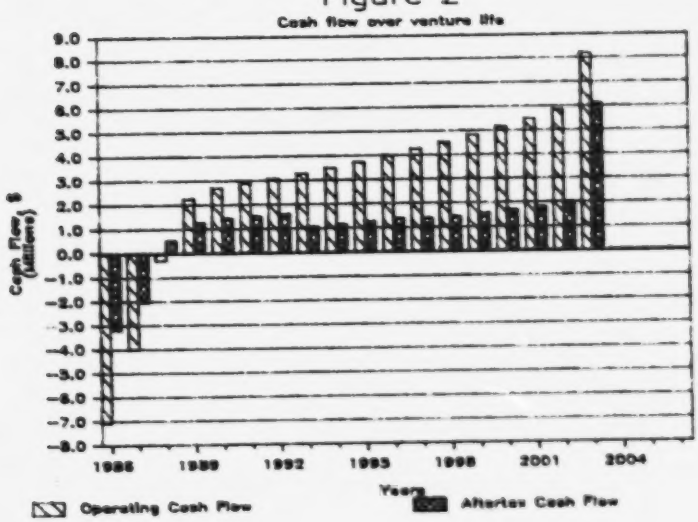
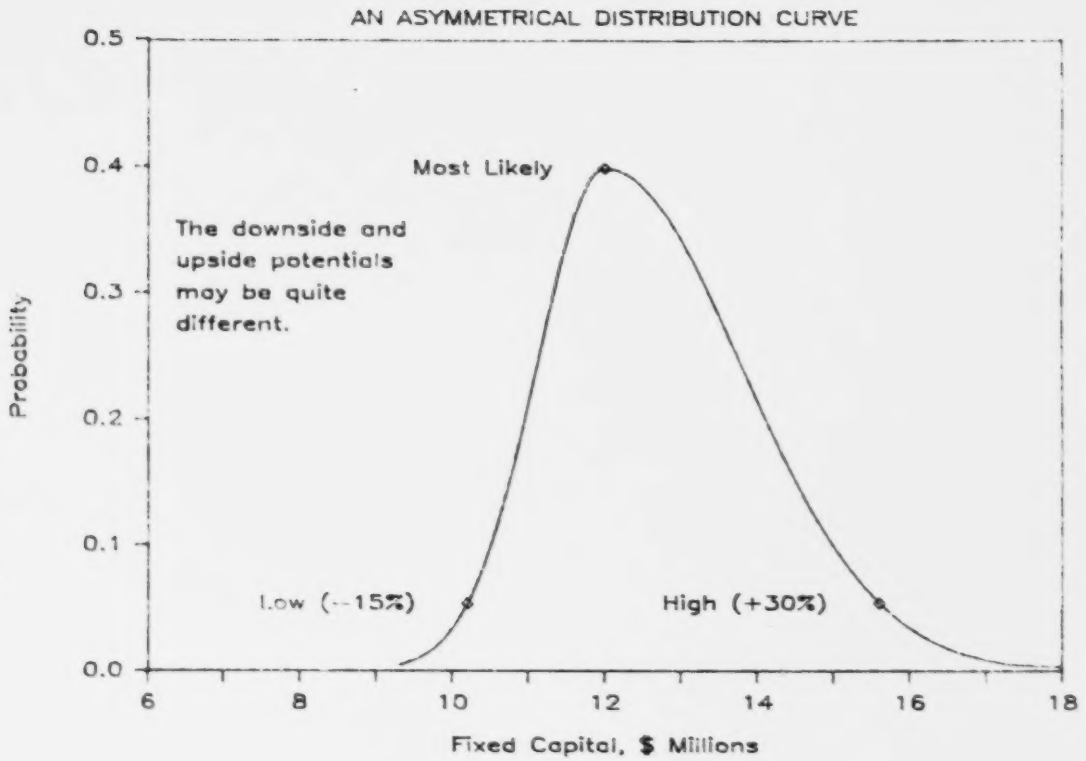
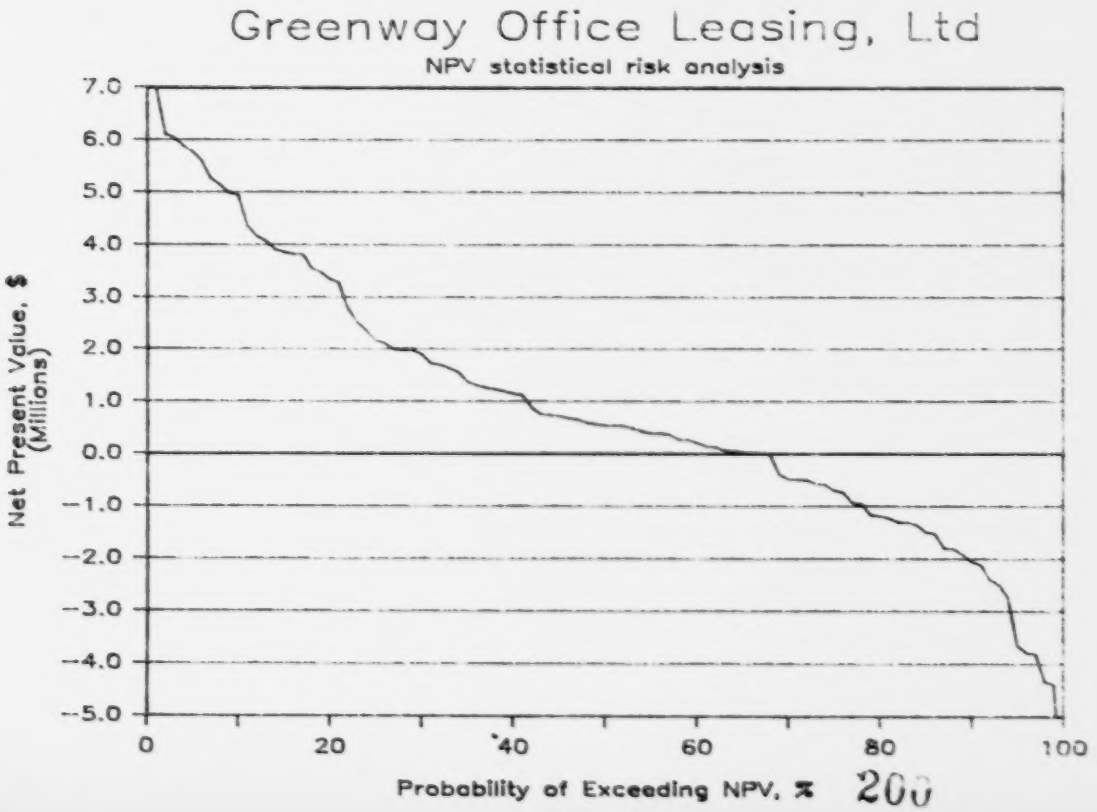


Figure 2




AN ASYMMETRICAL DISTRIBUTION CURVE
Probability
0.5
0.4
0.3
0.2
0.1
0.0
Most Likely
The downside and upside potentials may be quite different.
Low (--15%)
High (+30%)
6
8
10
12
14
16
18
Fixed Capital, $ Millions


Greenway Office Leasing, Ltd
NPV statistical risk analysis
Net Present Value, $ (Millions)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
0
20
40
60
80
100
Probability of Exceeding NPV, %

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ABSTRACT

Tax planning is an important factor in financial management planning for the entrepreneur. Without proper tax planning, a financial profit could be effectively eliminated by the expense of income tax. All potential profits should be planned in terms of profits after income tax and not before income tax.

FINANCIAL MANAGEMENT/TAX PLANNING FOR THE ENTREPRENEUR (1)

BERNARD W. MEYLER

For many taxpayers the approach of summer heralds a time of financial reappraisal. It is a time when the year's transactions are generally known, and it is not too late to take corrective action to minimize tax on those transactions. This Paper is designed to make you, as an individual taxpayer, aware of your personal tax choices for the 1986 tax year and of how your actions will affect your federal income tax liability for the year. It also explores how your personal tax decisions in 1986 will affect your tax liability in future years.

Tax planning primarily concerns the timing and the method by which your income is reported and your deductions are claimed. The tax law permits you as a taxpayer to select among various options in the reporting of income and the claiming of deductions. Your task is to decide which of these options will minimize your tax.

In order to make this decision intelligently, you must have a fairly accurate picture of your tax situation not only for the current year but also for the next year. It would be pointless, for example, to defer income from 1986 to 1987 if you are going to be in a higher tax bracket in 1987.

Tax planning depends not only upon an accurate knowledge of the tax laws as it exists for 1986 but also upon knowledge of its effect in 1987 and future years. For 1986 and 1987, you must contend with changes in the tax law that may be made as a result of President Reagan's tax reform proposals.

Effective tax planning can be a painstaking process, which involves testing out various alternative projections of your future in light of the relevant tax law. Today, you may replace the sharp pencil you have brought to this task with computerized systems, which give you the ability to research the many "what if" questions that are an integral part of the planning process.

The bottom line for your year-end tax planning decisions is to time your income to fall in years when it will be subject to the lowest tax and to time deductible expenses to fall in years when it will offset income subject to a high tax rate. You should also keep in mind that, if you postpone a tax, you have, in effect, an interest-free loan from the government for the amount of the postponed tax. This means that, if you expect to be in the same or lower tax bracket in 1987 as you are in 1986, you should defer the receipt of income to the later year and accelerate deductions into the earlier year. If you expect to be in significantly higher bracket in 1987, however, the opposite strategy is dictated: you should accelerate your income into 1986 and defer your deductions until 1987.

Economic factors usually outweigh tax factors in year-end tax planning. It would not make sense, for example, to defer an item of income if your chances of collecting it are materially reduced. The time value of money must also be taken into account. Furthermore, you should consider how your planning decisions will affect your liability for state and local income taxes.

If you compute your federal income tax on a calendar-year basis, your opportunity for tax planning for a particular year generally ends on

December 31. (A notable exception is your contribution to an individual retirement account (IRA). Thus, when you compile your records and meet with your tax return preparer some two or three months after the close of the tax year, it is far too late to do anything except file your tax return on the basis of the events that took place in that preceding year. Failure to effectively utilize tax planning opportunities can result in your paying more in income tax.

An important aspect of your year-end tax planning is a comparison of your expected 1986 tax liability with your projected 1987 tax liability. Comprehensive tax reform proposals make this comparison particularly difficult in 1986 as the final form of any new law may not be known until very late in the year. The following is a summary of some of the major points of the President's tax proposals that may affect you in 1986 and 1987.

Tax Brackets. The President's proposal would abandon the current rate structure of 14 brackets ranging from 11 percent to 50 percent and adopt a three-bracket system of 15,25, and 35 percent. The change would be effective beginning July 1, 1986, and, as a result of the mid-year effective date, the 1986 tax rate schedules would be a blend of the two systems. Indexing of the brackets would continue. Unless you are in a low bracket in 1986 and expect a significant increase in taxable income in 1987, your tax rates would most likely be lower in 1987 if the proposal is adopted.

Personal Exemptions. Under the President's proposal, personal exemptions would be increased from $1,040 each in 1985 to $2,000 each in 1986. Thereafter, the $2,000 figure would be indexed each year for inflation. This change would have the effect of further decreasing your taxes.

Two-earner Deduction. 1985 would be the last year in which the two-earner married couple deduction could be taken if the President's proposal is adopted. This would have the most impact on you if you file jointly with your spouse and your income levels are similar. In such a case, you could expect the change to increase your tax bill somewhat.

Itemized Deductions. The President's proposal would increase the zero-bracket amount to the following:

	Proposed zero-bracket amounts
Married, joint return	$4,000
Married, separate returns	2,000
Single	2,900
Head of household	3,600

Such an increase would make it harder to itemize your deductions in 1987. If you anticipate that your 1987 deductions will fall short of the new zero-bracket amount, but you are able to itemize in 1986, you should consider accelerating itemizable deductions into 1986. For many taxpayers, this strategy would pay off even if a new tax law is not adopted.

State and Local Taxes. A controversial change proposed in the President's plan is the elimination of the deduction for state and local taxes. This change would affect you only if you can itemize your deductions. Like most of the proposed changes this would go into effect in 1986.

Charitable Deductions. Nonitemizers would lose their deduction for charitable contributions in 1986 under the President's proposal. The original Treasury proposal also recommended limiting the itemized deduction to contributions in excess of two percent of your adjusted gross income.

In addition, the Treasury plan proposed to end the deduction for unrealized gains on property. The President's proposal did not adopt these points. If you are planning a contribution in the near future, however, it might be prudent to make the contribution in 1986 if you can use the deduction this year.

Interest Deduction. The President's proposal would place new limitations on the deductibility of personal interest, that is, interest that is not paid or incurred in your trade or business. After a several-year phase in the new rule, your deduction would be limited to:

(1) interest on loans secured by your principal residence (principal amount limited to the fair market value of the residence); plus
(2) your net investment income; plus
(3) $10,000

Capital Gains. Under the President's proposal, the deduction for net long-term capital gains would be decreased from 60 percent to 50 percent. Since the highest marginal tax rate would also be decreased from 50 to 35 percent, the maximum tax on capital gains would actually decrease from a maximum of 20 percent to a maximum of 17.5 percent. Because of the mid-year effective date for the rate change, the tax on long-term capital gains recognized in 1986 would be somewhere in between. The original Treasury plan proposed eliminating the capital gains deduction altogether and replacing it with a system of indexing the basis of capital assets for inflation.

Tax Shelters. The President's proposal would increase the tightening of tax shelter rules that has occurred over the past several years. In addition to the proposed new limitations on the deduction of interest expense, the plan proposes to extend the at-risk rules to real estate. As a result, you would not be able to take deductions with respect to interests in real estate acquired after 1985 that would exceed the amount you have at risk in the investment.

Business Property. Effective for property placed in service after 1985, the President's proposal would eliminate the investment tax credit and significantly change the Accelerated Cost Recovery System (ACRS). ACRS would be replaced by the Capital Cost Recovery System which would allow cost recovery of real or inflation adjusted cost, assign property to new recovery classes based on economic depreciation rates, and prescribe depreciation schedules and recovery periods that would produce systematic investment incentives that are neutral across recovery classes.

In addition to the changes proposed by the President, H.R. 2475, would extend the recovery period for 18-year real property to 19 years.

Special Tax Computations. 1985 would be the last year you may income average if the President's proposal is adopted. The impact of this change would be minimized, however, by the overall rate decreases. The alternative minimum tax would be retained and tightened.

Retirement Savings. Beginning in 1986, if the President's plan is enacted, the amount of deductible contributions to an IRA by a married couple would be increased for those couples in which one of the spouses does not work. The current limit of $2,250 would be increased to $4,000 ($2,000 for each spouse) to put nonworking spouses on a par with those who work. Under a modification of the President's proposal, the cash or deferred option that is available under many employer-sponsored retirement plans would be eliminated. Another proposed change would eliminate special capital gains and 10-year averaging treatment for lump-sum distributions

from an employer-sponsored plan. This change would become effective in 1986 except if you reach age 55 by January 1, 1987, in which case you would be subject to a six-year phase-in of the new rule.

Income Shifting. Under the Presidents proposal, your opportunities for shifting income to members of your family who are in lower tax brackets would be severely limited starting in 1986. One point of the proposal would tax unearned income of children at their parents' marginal tax rates. Another would limit the use of grantor trusts as income-splitting devices. This change would be effective for irrevocable trusts created after 1985.

Short-Term Tax Planning

Short-term tax planning not only concerns the timing of the reporting of income but also concerns the claiming of allowable deductions. That is, should you take steps to incur expenses that are allowable deductions before December 31, 1986, or should you wait until 1987?

The tax impact of short-term deduction planning is usually easy to measure because you are comparing only two tax years, the current year, 1986, with the succeeding year, 1987.

Additional Tax Calculations

In addition to the regular tax computations, you may need to computer your tax using one of the special rules. The first of these, the alternative minimum tax, is mandatory if you qualify for its use and its application will serve to increase the tax you would otherwise pay. The second two, which are two types of income averaging rules, are optional and will serve to reduce your taxes if they apply. The last special computation, the estimated tax, will not affect the total amount of tax that you pay, but it is mandatory for all those who are not paying a large enough portion of their eventual tax liability through withholding.

Alternative Minimum Tax

To ensure that taxpayers with large incomes but substantial tax preference items do not completely avoid taxation of their incomes, Congress has provided the alternative minimum tax (AMT). Because AMT has the effect of negating many of your deductions, it could jeopardize your planning efforts if you are not careful.

The AMT is a flat 20-percent tax on your alternative minimum taxable income. Your tax bill for the year will be your regular tax, whichever is greater (adjusted by certain credits). The special alternative minimum taxable income, upon which the AMT is determined, is equal to your adjusted gross income increased by your tax preference items and reduced by certain itemized deductions and your exemption amount.

If you have tried to shelter your income through the use of tax preference items, you may find that much of your planning is rendered ineffective by the imposition of the alternative minimum tax. For instance, although real estate tax shelters may generate significant depreciation deductions because the at-risk rules do not apply, the extent to which ACRS deductions exceed the amount that would have been deductible had straight-line depreciation been used over a 15-year or 18-year recovery period, depending on when the property was placed in service is a tax preference item.

There are, however, steps that you can take to reduce the AMT's effect on your tax liability. For instance, you can eliminate certain tax preferences.

Long-term capital gains are a major item of tax preference. If you have long-term capital gains, you should consider offsetting the long-term capital gains with unrealized losses, if you have them. Another

possibility, if you expect not to be subject to the AMT next year, is to postpone taking your long-term capital gains until then.

Since certain itemized deductions (e.g., state and local taxes) do not reduce AMT taxable income, they produce no tax savings if you are paying the AMT. Therefore, you should postpone such deductions until 1987 (if you expect it to be a non-AMT year). In addition, other deductions, such as the charitable contribution deduction, have a lesser impact in a year in which the AMT applies, since the income is taxed at a 20-percent rate, than in a non-AMT year.

Another way to take advantage of the rate of differentials between an AMT year and a non-AMT year is to accelerate items of ordinary income. Since your tax rate in an AMT year is 20 percent, you are better off having ordinary income fall in such a year than in a non-AMT year.

If you are holding incentive stock options and will be subject to the AMT in 1986, but not in 1987, hold off exercising the option until after the first of the year. Although the excess of the stock's fair market value at the time of exercise over the option price is an item of tax preference, it is not subject to the regular tax.

If you expect to be subject to the AMT in 1987 but will not be subject to it in 1986, the reverse of these strategies would be in order.

If your income has increased significantly over the past few years, you should consider computing your federal income tax by using a special method called "income averaging." Basically, this method of computing your income tax is meant to even out your income over the four years ending with 1986 so that your 1986 income is taxed at a lower rate than would otherwise apply. Income averaging is meant as a relief provision for taxpayers who, because of unusual events, find themselves in an unusually high tax bracket for one year, while their incomes for the preceding years had been much lower. If you are one of these taxpayers, you should certainly consider computing your income tax by the income averaging method. If you are eligible to use income averaging, it will reduce your income tax.

RETIREMENT PLANNING

The federal income tax laws encourage the establishment of a wide variety of retirement plans by according such plans favorable tax treatment. Whether the plan is established and maintained by your employer (both unilateral and collectively bargained plans) or you have set one up yourself, your participation gives you the following three types of tax benefits:

(1) The money contributed to the plan is, within limits, excludable from your gross income, in the case of employer contributions, or deductible, in the case of your own contributions. The tax is not avoided forever, of course, but the tax on the portion of your income that goes into the plan is deferred until you withdraw it.

(2) The earnings on your retirement plan investments are not taxed when earned. Again, this only postpones the tax until the money is withdrawn.

(3) When you finally withdraw the investment, it is very likely to be taxed at a lower rate than those applicable when the contributions were made. This is true for two reasons: (a) your income will probably be less after you retire and, therefore, you will be in a lower tax bracket, and (b) for certain types of distributions, special favorable tax rates are available.

Because the purpose of these plans is to provide you with funds during your retirement and because you are offered tax incentives for opening and maintaining them, Congress has imposed certain penalties if you withdraw the money before you reach a certain age or upon the happening of certain events. If you are planning to participate in such a program because of the short-term tax advantages, but you think you will need to withdraw the money in a year or two, you should probably place your money in another type of savings arrangement. Otherwise, these plans are tax-cheap ways of building up retirement savings.

Once you become a participant in a retirement plan, you will have a number of decisions to make during the life of the plan:

(1) How much should you contribute to the plan?
(2) In what should the funds be invested?
(3) Should you transfer the funds from one place to another (a rollover)?
(4) Should you make a premature withdrawal from the plan despite the penalty?
(5) How should you receive your final distribution from the plan?

The answers to some of these questions depend on the type of plan is which you are participating.

ESTATE PLANNING

Your year-end tax planning is not complete without a review of your estate plan. If your estate is large enough so that it will eventually be subject to estate tax, you can take steps now to minimize that liability and to ensure that the greatest possible share of your estate goes to your heirs rather than to the government. A brief review of the federal estate and gift tax is, therefore, in order.

. Unified estate and gift tax

A single unified rate schedule is provided for estate and gift taxes. The rates range from 18 percent to 55 percent. This rate is reduced to a maximum of 50 percent for estates of decedents dying and gifts made after 1987.

A single unified credit is used to offset estate and gift tax liability under the unified transfer tax system. The amount of the credit increases as follows:

Year of Death or Gift	Unified Credit	Estate "Exemption Equivalent"
1986	155,800	500,000
1987 and over	192,800	600,000

An estate owner may avoid federal taxation on the value of his estate if the surviving spouse is the recipient of the property. There generally is no limit on the amount of property that can pass from one spouse to another tax free through use of the estate tax martial deduction.

Although the unlimited marital deduction makes it possible for an estate owner to transfer his or her entire estate to a surviving spouse tax free, maximum use of the marital deduction is not always the best way to save tax dollars. Estate taxes may be saved, through use of the unlimited marital deduction, on the estate of the first spouse to die. But the property transferred from the decedent to the surviving spouse will be included in the estate of the surviving spouse and that estate will not be allowed a marital deduction when the surviving spouse dies. Thus, the value of the estate of the surviving spouse may have been so increased through use of the unlimited marital deduction that there will be a large

estate tax due at the time of the surviving spouse's death.

In many situations, taxpayers will benefit most by using the marital deduction as a device to equalize the value of the two estates. In that way, the lowest estate tax may be paid, i.e., the tax on two estates of the same size will generally be lower than the tax due on one estate that is twice as large. The use of the marital deduction to its maximum benefit requires careful planning, and long-range tax effect of your decision must be considered.

. Gifts

Since transfers to your spouse no longer produce any estate or gift tax liability, the entire focus of estate tax planning has shifted to other types of transfers. The aim is to transfer your and your spouse's estate, viewed as a single unit, to your heirs at the minimum tax cost.

One of the most effective ways to minimize your eventual estate and gift tax liabilities is to maximize your use of the annual gift tax exclusion. By use of this exclusion you will have no gift tax on gifts of $10,000 per donee per year ($20,000 per donee per year for married couples). Property that is given away will not be subject to the estate tax at the time of death.

Use of the exclusion is a tax-free way of reducing your eventual taxable estate. If, for example, you and your spouse have two children, you and your spouse can reduce your combined estates by a total of $40,000 per year ($20,000 gifts to each child). As your children get older and get married and have children of their own, your gift-giving opportunities will increase, as gifts to your children's spouses and to your grandchildren are subject to separate annual exclusions. Over a period of years, a sizeable portion of your estate can be transferred in this way without any liability for tax.

. Gifts of income-producing property

In addition to their estate planning benefits, gifts to your children could have income tax benefits, too. If the gift is of income-producing property, the income tax due on that income will be paid by the donee rather than by you. If the donee is in a lower tax bracket, the tax bill will naturally be lower than it would have been if you had retained the property. Another advantage of this type of gift is that the income will never become part of your estate and will not be subject to estate tax at your death.

Although gifts of this type are legitimate, gifts to family members are carefully scrutinized by the IRS. Generally, in order for a gift to be valid, you must irrevocably divest yourself of title and control over the property. This is sometimes a problem, particularly if the donee is a minor child. Some states have adopted the Uniform Gifts to Minors Act to assure that gifts meeting certain criteria are considered legal gifts. It is just important to remember that if you plan to hold onto any strings when you make a gift, you should consult a tax professional to see if your anticipated tax benefits may be nullified by the form of the gift.

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INNOVATIVE FIRMS NEED INNOVATIVE FINANCING

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ABSTRACT

Innovative business - new firms which create market demands for new products and services - often have difficulty raising startup funds because of the unproven nature of new ventures. This paper summarizes the increasingly important and changing roles of informal investors and venture capitalists in providing new firm financing. The paper also examines how reducing costs in the startup phases of a business can also reduce the amount of startup capital required.

INTRODUCTION

This paper begins with the simple observation that the lack of creative financing has prevented many innovative businesses from starting. An innovative business - one which often creates a brand new demand for its output, product or service is one which is viewed with skepticism in most formal financial channels - principally by bank loan officers. The reasons for such skepticism of would-be entrepreneurs are generally well founded: these businesses do have higher failure rates than firms with track records or new firms which enter established markets. In fact, fewer than 5 percent of innovative firms receive start-up bank financing.

Part I of this paper is a short section which identifies some of the more well-known and a few of the less recognized innovative businesses that have developed during the past several years. Part II examines some financing alternatives for these businesses other than the conventional bank credit markets. Included in this list are alternative leasing arrangements - of both labor and capital, the increasingly important role played by informal investors, and equity sharing arrangements such as employee stock ownership plans (ESOP's), the long proposed small business participating debenture (SBPD), industrial revenue bonds (IRB's), and venture capital funds. Some additional cost sharing arrangements are also discussed.

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INNOVATIVE BUSINESSES

The dictionary definition of an innovation - a new idea, method, or device - is unrelated to either market tests or to public policy. Therefore innovative businesses are those which introduce new ideas, methods, or devices but which also pass market tests. Similarly, the term innovation implies nothing about a public policy which can also stimulate innovation - such as industry deregulation which creates an environment for increased market entry.[1] An examination of some kinds of innovative businesses indicates that they often come out of an existing business, but start by doing something different which generates a new demand for a product or service. Other innovative firms come quite obviously from applications of new technology.

Peter Drucker has observed that new investment opportunities often come from both inside and outside large firms. He attributes these to accidents (such as 3M's "POST IT" pads), process needs (the switchboard) or incongruities. Factors outside a company which influence new business formation include changes in perception, demographic changes (such as aging) and new knowledge.[2]

Applying New Technology to Old Industries

The last several years have brought a variety of innovative businesses which have been offshoots from existing firms or existing methods of doing business. Consider for example, the fast food company that delivers, the supermarket which has an eat-in-store taco bar instead of a salad bar, or the creation of health maintenance organizations (HMO's) to help contain medical costs. These firms essentially have tried innovative marketing of fast food and medical services, respectively. And often, banks are somewhat receptive to these firms because the predecessor idea has already been successful.

Deregulation has opened many new markets previously closed because of entry requirements, and the new entry has brought new ideas. Two examples include second day guaranteed delivery services and new freight brokerage

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[1]Bruce D. Phillips, "Deregulation and the Growth of Small Business," Economic Impact, January 1986, pp. 70-76.

[2]Peter Drucker, "The Discipline of Innovation" Harvard Business Review, May-June 1985, pp. 67-73.

businesses. Local trucking companies found that they could compete with air express services, often on a 2 day basis, once the geographic restriction to operate was lifted; of course the cost of second day guaranteed delivery was much lower than the cost of air freight. In the case of freight brokers, deregulation created the need for computerized analyses to determine the least cost combination of transportation modes to ship between expanded origins and destinations, a new industry created that still delivers transportation at a total lower price than before the innovation.

Some of these new firms could be started with personal equity, as with a freight broker who only needed a computer and access to software and clients. Other firms, such as new trucking firms, could minimize start up costs by the purchase of used equipment, sometimes bought from large trucking firms adversely affected by deregulation. However, the competition generated to obtain a bank loan to start a new guaranteed second day delivery service was likely to be stiff and uncertain.

New Concepts and New Technologies

Firms based upon new concepts or that apply new technology often are precluded from conventional sources of financing. This is because a proven market cannot be assumed by a lender, or sufficient collateral is not available for a large loan. Video and computer stores were initially in these categories. Video transfer stores - stores that only convert slides and movies to video tape - seem to be in that category today. To paraphrase a popular commercial, it is these "emerging growth companies" which are most in need of creative equity financing.

In some cases, as with new employee leasing companies, entry barriers do not exist, because there is no perceived market; costs of entry are therefore reduced. The 300 or so employee leasing firms estimated to be in existence today "lease" employees to small firms.[3] In essence, they interview, train, and provide benefit packages to employees which are often superior to what the new small firm can itself afford to provide including immediate vesting in a pension plan. [4] Of course, employers should be concerned that leasing employees provides economic advantages to them, such as lower paperwork and

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[3]Based upon a survey published in 1986 by Arno and Associates, Los Angeles, California, December 1985.

[4]This is legally required by leasing companies created under the safe harbor provisions of the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982.

training costs.[5] Leasing firms, however, began business without an assured market. Clearly employee leasing companies are examples of innovative firms.

The available aggregate statistics offer little help in the identification of innovative businesses, let alone the kind of financing they require. While self-employment increased 37 percent or by 2.1 million from 1975 to 1985, the data do not indicate who in fact has started innovative firms and in which industries the firms are located. Surveys are needed for this specific kind of information.

CREATIVE FINANCING FOR INNOVATIVE FIRMS

Clearly the first major issue is to find available sources of funds. But once these alternative sources have been located and itemized, the next decision for a would-be entrepreneur in raising funds creatively involves the tradeoff in deciding how much capital to raise verus how much equity to give up. Some new startup firms may be undercapitalized because of a reluctance to give up ownership. However, the sale of equity does forego the payment of interest and retains borrowing rights, and may result in a more realistically capitalized venture.[6]

Some writers have argued that the adrenalin associated with business startups overwhelms cool-headed anticipation of the need for capital at various stages of a business. For that reason, it has been argued that venture capitalists or informal investors will only provide part of the funds requested because they assume that new entrepreneurs have underestimated capital needs and will only return to ask for funds again. Thus it is to the advantage of a new business owner to come up with a multi-stage financing plan.

The anecdote is often told of a woman who started a new magazine and approached a group of informal investors for startup capital. She was turned down when she first wanted to buy her capital equipment and again turned down

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[5]Under contract to the Office of Advocacy of the U.S. Small Business Administration the ATAC Corporation (California) is conducting a study of employee leasing firms. This study should be completed in July 1986.

[6]James McNeill Stancill, "How Much Money Does Your Venture Need?" Harvard Business Review, May-June 1986, pp. 122-139.

when she wanted to lease it. Finally her business plan was accepted when she convinced a supplier to lend her the equipment for a full year to get started.[7]

Informal Investors

During the past five years, the informal capital market has rightfully received increased attention. According to a recent SBA sponsored study on informal investment in the Sunbelt region, the size of the "business angel" market is approximately 10X the amount of venture capital extended in these geographic region, Gaston and Bell found that 57 percent of informal investments went to startups; the respective figures for firms more than 1 year old are similar. The real difference, however, may be in the increased tendency of informal investors to finance startups (see Table 1).

While the general profile of informal investors seems to have remained about the same from 1980 to 1986, the kinds of investments financed may be shifting somewhat. In 1980, Wetzel and Seymour found that 44 percent of all informal investments made went to startup firms; by 1985, in a different regions: $2.6 billion from informal investors versus $600,000 in venture capital funds.[8] In another earlier SBA sponsored study, Professors William Wetzel and Craig Seymour of the University of New Hampshire estimated that most informal investors require rates of return of 25-50 percent for startup inventors.[9] This is often because most informal investors expect to losemoney about one-third of the time.

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[7]Zanas Black and Ian C. MacMillan, "Milestones for Successful Venture Planning." Harvard Business Review, September-October 1985, pp. 184-196.

[8]Robert E. Gaston and Sharon Bell, "Informal Risk Capital Investment in the Sunbelt Region." Prepared under contract for the Office of Advocacy of the U.S. Small Business Administration, December 1985, p. 1-2.

[9]William E. Wetzel, Jr. and Craig Seymour, "Informal Risk Capital in New England." Prepared under contract for the Office of Advocacy of the U.S. Small Business Administration, January 1981.

Table 1 - DISTRIBUTION OF INVESTMENT FUNDS BY TYPE OF FIRM

Type of Firm	Startup	Infant (Less than 1 Year Old)	Young (1-5 Years Old)	Established (More than 5 years old	All Investments
Type of Financing			(Percents)		
Informal risk capital					
Wetzel and Seymour (1981)	44	18	18	20	100.0
Gaston and Bell (1985)	57	10	9	24	100.0
Small Business Investments Companies (1980)	38	19	15	27	100.0

The growth of the service sector and industry deregulation have also influenced changes in the industries in which informal investments are made. In 1980, manufacturing accounted for 57 percent of informal investments; in 1985, it accounted for under 20 percent.[10] On the other hand, investments in the finance sector rose from 9 percent to 18 percent between the two time periods. Service sector investments rose from 12 percent to 16 percent.[11] In particular, informal investors seem less inclined to invest today in high technology manufacturing than had been true in the past.

It is of interest that despite these hypothesized shifts in the behavior of informal investors, the profile of the informal investor has remained very similar. He is still, on average, a male in his late 40's who invests between $10,000 and $100,000 once a year within 50 miles of his home, and rejects 2 out of 3 applications for funds that he sees. In general, he retains some voting control in the enterprise in which he invests which is generally under 50 percent. He also usually earns under $100,000, has a net worth greater than $750k, and would like to liquidate the new firm within 4 to 6 years.[12]

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[10] Craig and Seymour, op. cit., p. 18. Gaston and Bell, op. cit., p. 1-11.

[11] Of course if these figures were adjusted to reflect industry differences between the two regions, it is unclear whether the results would be as different. In addition, it is possible that tax reform will affect the allocation of funds to the real estate or other sectors.

[12] A good summary of the various studies of informal investment is found in Jerry Feigen, "Who Are These Investors?" In Business, March-April 1986, pp. 56-58.

How large a business will informal investors finance? Generally the answer is a startup in the $125k-250k range. This is made up of 2-3 informal investors who pool their investments (of about 40k each), and then lend the new business an amount equal to their cash investment. This comes out to 3 investments of about $75,000 each.

There are various organizations which today act as brokers to bring investors and inventors together. Probably the major service these firms perform is to screen out proposals which are underfunded, have unrealistic prices, or are generally not well thought out. Organizations of this type now exist in Oklahoma, Indiana, Missouri and Massachusetts, among others. To be successful, however, applicants must have the confidence of the investors who trust only one or two close business associates other than themselves to make the correct decisions.

Venture Capital Firms

The popularity of venture capital firms, particularly in the New England region, brings forth the good news and the bad news. The good news is that there are more venture capital firms than ever before: perhaps $19.5 billion in the venture capital industry and $2.5 - 3.0 billion dollars annually in new investments. The bad news is that only 1 to 3 percent of proposals presented to venture capitalists or 10 percent presented to Small Business Investment Companies are ever funded.[13]

The venture capital industry is composed of several parts: about 250 independent venture capital firms (including state initiated companies), 80 corporate venture capital investment firms, and 360 Small Business Investment Companies (SBIC's). In 1984, the independent venture capital companies contributed almost 70 percent of the funds in the industry (see Table 2). Table 2 also shows that the percentage of venture capital investments emanating from private funds has increased during the last several years, presumably a result of a series of declines in capital gains tax rates.

Many of the independent private venture capital funds are family owned funds - such as the Rockefellers or Whitneys. Many others are professionally managed partnerships that are financed by endowments of foundations, insurance companies, pension funds, or foreign investors. Of the 360 SBIC's, about 200 make venture capital investments; the remainder make loans on very tightly specified investments.

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[13]Jerry Feigen, "Dispelling Financing Myths," In Business, May-June 1986, pp. 52-59. Of course, the percentage of "good" proposals that are not funded is not known.

Table 2 - DISTRIBUTION OF VENTURE CAPITAL FUNDS, 1982-1984

Source:	(Percent) 1982	1984	Change: 1984-1982
Independent Funds	55	68	+13
Small Business Investment Companies	18	11	-7
Corporate Funds	27	21	-6
All Sources:	100	100	-

Source: Adapted from The State of Small Business: A Report of the President, - May 1985, p. 220.

During 1983, the average size of a venture capital financing package was about 2.3 million, made up of a series of risk-sharing investments of $500,000 - $800,000 each. SBIC's however had lower average commitments of about $148,000 in 1982. (The SBIC combines capital with SBA-backed funds to finance small firms.) The conclusion from these summary statistics is that early stage financing of under a half million dollars may be more easily obtainable from an SBIC than a private venture capital firm which may favor more established firms.

The market for private venture capital is also relatively concentrated. The primary markets are in New York City, San Francisco, Boston and Chicago, and secondary markets are in Dallas/Houston, Southern Connecticut, Minneapolis/St. Paul, Cleveland/Columbus, Southern California, the Pacific Northwest and the Southeastern states. New England, with 6 percent of the U.S. population, accounts for 30 percent of venture capital investments. The Far West and New England together contribute almost 50 percent of total venture capital funds.[14]

There are an increasing number of state backed venture capital firms which may be more favorable to start-up firms than private venture capitalists. For example, Connecticut has 2 venture funds - one for established firms, the other for seed capital for new firms. North Carolina provides $50,000 of seed money to new firms engaged in R and D activities for

[14]Stanley E. Pratt, "Venture Capital Investment in National Need Areas." Prepared under contract for the Office of Advocacy of the U.S. Small Business Administration, June 1982.

a royalty payment of 4 percent of the firm's sales for 15 years, not to exceed 500 percent of the original investment. Some states like Indiana operate a venture fund through grants to universities in the $50k-$250k range, managed by the Indiana Corporation for Science and Technology. Firms that are already profitable may be funded by the Massachusetts Capital Resource Corporation, which is capitalized by nine insurance companies.[15]

In addition to the indirect investments through state legislated venture profit and non-profit corporations, many states also issue bonds to raise seed capital for new firms. Today Alaska, Illinois, Massachusetts, New York, North Carolina and Utah, among others have state funds which are used for seed capital. Some of these states also provide working capital funds for infant firms less than 1 year old for inventory purchasing to hold the firms liquid until the first payments arrive.

In New York, some private corporations - such as the Rothschild Corporation - manage business development corporations (BDC's) which operate under state charters. However, most of the 25 states which have BDC's finance less than 10 percent of startups with these funds.

This brief summary can only touch upon the numerous sources of state backed or managed funds for early-stage firms. Any prospective entrepreneur would be amiss not to investigate the availability of such funds in his or her respective state.

Pension Funds/R and D Partnerships

It has been estimated that $600 million of approximately $300 billion (or 0.2 percent) of public pension funds are invested in new firms. 25 states now use tiny portions of pension fund trusts for such start-up purposes.[16] These funds however are very conservative and require large returns for the investments made. For example, the venture portion of the New York State Teachers Retirement Fund puts 60 percent of funds in second round technology transfers, 25 percent in buyout transactions, and 15 percent in seed

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[15]A good summary of these programs is found in U.S. Small Business Administration, Office of Advocacy, "State Activities in Capital Formation: Venture Capital, Working Capital, and Public Pension Fund Investments." (Washington, D.C., June 1985).

[16]State Activities, op. cit.

investments, but not necessarily in brand new startups. Some state pension funds also indirectly contribute to startups by purchasing pools of SBA guaranteed loans as is done by the Kansas Public Employees Retirement Fund.

OTHER EQUITY SHARING ARRANGEMENTS - INDUSTRIAL REVENUES BONDS AND SMALL BUSINESS PARTICIPATING DEBENTURES

There are several additional quasi-public equity sharing arrangements available or proposed for small start-up firms. For several reasons, however, the use of instruments such as the Small Business Participating Debenture (SBPD) and the industrial revenue bond (IRB) offer limited assistance for new startups.

The use of industrial revenue bonds extends back before the 1960's when they were used by both large and small firms, as well as for capital improvements projects. In 1968, the U.S. Treasury restricted the use of IRB's to issues of either under $1 million or under $10 million. The selected uses permissable with the bonds included industrial parks (which have been of some help to young firms), residential mortgages (again of some use to small construction firms) and a variety of public infrastructure investments such as airports, mass transit facilities, sports and convention centers, etc.

The Treasury Department has consistently opposed IRB's because of the revenue losses and in fact further restricted their use in the 1982 TEFRA Tax Act and in various proposed versions of tax reform. Effective in 1987, small issue IRB's will no longer be tax-exempt and tax reform proposals would generally eliminate IRB's as a source of funds for private use. In addition, tax reform proposals place a cap on the value of IRB's that may be issued by each state. It is probable, therefore, that IRB's as a source of funds for small firm startups will be gradually eliminated despite the fact that they are generally fully collaterilized.

The Small Business Participating Debenture (SBPD) was introduced in Congress in 1978 by Senator Lowell Weicker of Connecticut. In various forms, it has been re-introduced in every Congress since then with various amendments added. The SBPD is a general or secured obligation which pays a sub-market rate of interest plus a share of total earnings of the new firms which it helps finance. It has been supported by numerous trade and professional groups and was one of the top 15 recommendations of the 1980 White House Conference on Small Business.

The owner of an SBPD could deduct interest payments as business expenses while an investor would treat interest income received from the SBPD as ordinary income, but any earnings from the bond would be taxed like a long term capital gain. The SBPD would also have a fixed maturity date, and its terms would be set by the market. Recent amendments to the bill creating the SBPD would restrict its use for non real estate ventures by domestic business issues with less than $1 million in "paid-in" capital.

As with the IRB, the Treasury Department opposes the SBPD on the grounds that long term capital is available elsewhere and, of course, is concerned about potential revenue losses. In addition, amendments to restrict the use of SBPD's to subchapter S corporations excludes their use by the vast majority of small firms which either begin as proprietorships or partnerships.

Therefore, for different reasons, both the IRB and the SBPD only provide marginal assistance as equity sources of start-up financing for small firms.

REDUCING COSTS

There are an increasing number of new and innovative techniques which new small firm employers can use to reduce costs. Those include taking advantage of employee stock ownership plans (ESOP's) and using leased employees. Consider ESOP's first.

Employee stock option plans (ESOPS) have been around since the late 1950's. They represent a way for an employer to raise wages without reducing cash flow. It is also believed that employees that have a share in the potential growth of their firm will be more productive. In addition, stock acquired by employees is not taxed until distributed - much like a pension or IRA type plan. Ten year averaging on income earned from ESOPS is permitted if an employee is more than 59 1/2 years old; or the income may be taxed at capital gains rates.

ESOPS are generally favored by Congress and will become qualified pension plans when tax reform passes. However because the Treasury Department would rather have risks reduced, it is unclear what tax benefits will accrue to ESOPS at the conclusion of the tax reform debate. For the employer, however, they remain temporarily a means of providing additional benefits at no immediate cost.

Employee Leasing Firms

Employee leasing firms are a new industry which originally grew out of medical partnerships. Doctors were looking for ways to see more patients, and could not afford the time to train, interview and evaluate employee progress. In addition, the physicians could not afford to offer the kind of benefit packages that they thought employees deserved, particularly a pension plan with instant vesting.

Today employee leasing companies are serving small firms generally in the service sector. Almost 30 percent of the firms using leased employees are smaller proprietorships and partnerships. In a series of interviews with

clients of leasing companies, most favored leased employees for the following reasons:[17]

better employee benefits provided	(71%)
less paperwork for staff	(38%)
less hassle with employees	(24%)
better pension plan for owners	(19%)
saves money for owners	(14%)
employee insurance is cheaper	(14%)

Generally, leasing firms need a total of 200-250 employees (with all clients) to be profitable; they can obtain better benefits for employees in client firms because of their size and negotiating power than very small employers negotiating separately with health and pension plans. In addition, they can offer benefits like pension plans that would not be possible without the rates negotiated by the leasing firms. Leasing firms therefore offer employers the promise of a more stable, better motivated work force than would otherwise be possible. Employee leasing should become an attractive alternative to small firms seeking to retain qualified employees while minimizing paperwork costs.

While the leasing of employees does offer the potential to lower long term costs, it must also still be shown to reduce costs in the short-run to become a more attractive option for small employers. As employees stress benefits to a greater extent than wage increases while inflation remains low, it is likely that leasing will become a more attractive alternative.

Trade Credit and Leasing

Using trade credit and leasing new or used equipment are two other standard techniques for maximizing the use of scarce startup capital by new firms. Trade credit is a short-term account payable due within a short time, often 30 to 60 days. It allows a new small firm to obtain inventory on short-term credit, and is granted by suppliers to new firms usually based upon the applicant's credit history. Some suppliers also give discounts for early payments (such as 1 or 2 percent discount for payment within 30 days), and some suppliers can help secure additional financing help through recommendations to bankers. In the event that trade credit is ever denied, often a new small firm can still obtain partial credit by paying for a portion

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[17]These data come from an ongoing survey of the employee leasing industry for the Office of Advocacy by the ATAC Corporation, op. cit.

of inventory up front. In a recent study on trade credit practices for the SBA, David Walker concluded that there was generally no shortage of trade credit for small firms given some minimally acceptable credit history.[18]

The decision by a new small firm to lease equipment is often caused by economic necessity - e.g. a capital shortage. Because of the different types of leases, however, new business owners often do not know whether to simply rent equipment, or enter into a sales-type lease. There are advantages to each situation. An ordinary non-purchase lease does not allow tax benefits in terms of the deductibility of interest and possible depreciation, depending on the circumstances. However, ordinary leases can often be broken with very short notification, and require no downpayment, e.g. they are often the cheapest kind of lease.

Sales or purchase type leases-which cannot be terminated - usually require purchase of an item at an agreed upon price at the end of the lease period. While this type of arrangement might result in cost savings over an extended period of time, there is a risk of obsolesence associated with such an arrangement. For example, many new entrepreneurs prefer not to buy computers or copiers because they fear obsolesence of the equipment. In addition, maintenance costs are often included in simple rental arrangements, but are sometimes not included once a piece of leased equipment is purchased. However interest costs usually are deductible when a lease/purchase arrangement is used.

The correct combination of required leasing and/or extensions of trade credit will vary with each new firm, but would-be entrepreneurs would be wise to include these various options as part of their financial planning exercises.

A final way for new small firms to reduce startup costs may be to buy all necessary legal services from large law firms. In the view of one writer, they may offer discounts to firms which will grow with them and offer greater access to banks, procurement officials, and potential customers.[19] Once a small firm is "locked in" at lower rates, it may remain a loyal customer when it becomes larger.

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[18]David A. Walker, "Factors Influencing Trade Credit for Small Business." Prepared under contract for the Office of Advocacy of the U.S. Small Business Administration, Washington, D.C., April 1984.

[19]Mark Rollinson, "Small Company, Big Law Firm." Harvard Business Review, Nov./Dec. 1985, pp. 6-14.

SUMMARY AND CONCLUSION

New entrepreneurs who need start-up capital to begin innovative firms often find the doors locked of many banks. This is because innovative firms - such as video transfer stores - cannot guarantee a commercial bank that a new market for the product or service really exists. The potential firms therefore must seek equity rather than debt financing if they are to proceed.

Of the equity financing arrangements surveyed, informal risk capital - investments in the 100K-250K wage - offered the greatest hope for new entrepreneurs. Recent measures of the size of this market obtained by the SBA through surveys indicated that it may be ten times as large as the market for venture capital in particular regions of the country.

In addition to informal investment sources of capital, proposed alternatives such as the small business participating debenture (SBDB) and pension funds were also examined as potential sources of equity. Generally, these sources were seen as having limited potential to provide much startup capital to new firms, although limited help has been available.

The last section of the paper suggested four ways to minimize costs in new small startup firms - by leasing employees and equipment, by using trade credit, and by issuing stock to employees (ESOP's) in lieu of wage increases. Taken together, these steps to minimize costs together with increased efforts to raise equity capital have helped many new innovative firms thrive in today's improved economic climate.

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THE MINIMIZATION OF TRANSACTION EXPOSURE BY A SAMPLE OF U.S. SMALL INTERNATIONAL BUSINESSES

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ABSTRACT

A company engaged in international business operations is likely to be concerned with foreign exchange risk. Foreign exchange risk refers to the extent to which a company's monetary transactions are affected by changes in exchange rates. Foreign exchange risk is divided into two components: translation exposure and transaction exposure. An analysis of translation exposure, or accounting exposure, is beyond the scope of this research. Transaction exposure is concerned with how changing exchange rates affect the value of the international monetary flows of a company.

The purpose of this paper is to determine how a select sample of U.S. small international businesses minimize their the transaction exposure. A sample of 50 small international businesses, located in the New York City metropolitan area, were surveyed regarding the techniques they employ to minimize transaction exposure. All of the companies surveyed relied exclusively on forward foreign exchange contracts to limit this key international financial risk.

I. INTRODUCTION

The role of U.S. small businesses in the international economy is unknown. U.S. small international businesses may account for a significant portion of U.S. trade.[1] Most companies, regardless of their size, that engage in international business receive or pay-out foreign exchange. These companies are concerned about the level of foreign exchange risk they must assume in their day-to-day international financial operations.

Foreign exchange risk is defined as "the extent to which a company's monetary transactions are affected by changes in exchange rates".[2] As Professor Alan C. Shapiro, an expert in international corporate finance, has noted:

> As a result of a series of investment, production, and other operating decisions, a firm generates both a current structure of assets and liabilities, and a stream of expected future cash flows. The most critical aspect of foreign ex-

> change risk management is to incorporate expectations about exchange rate changes into all basic corporate decisions affecting cash flow and financial structure. Once that is done, management is then in a position to decide whether to "self-insure" the risks of unanticipated (and largely diversifiable) currency fluctuations or to "lay them off" in financial markets.[3]

Foreign exchange risk consists of two elements: translation exposure and transaction exposure. Translation exposure "arises from the need to report consolidated worldwide operations according to predetermined accounting rules".[4] Strategies used by companies to minimize translation exposure are beyond the scope of this paper.

The second element of foreign exchange risk is transaction exposure. Transaction exposure is defined as "possibility of incurring future gains or losses on transactions already entered into and denominated in a foreign currency".[5] The term "transactions" includes purchasing or selling goods and/or services billed in foreign currencies and borrowing or lending in foreign currencies. A company engaged in cross-border business operations can eliminate transaction exposure only by conducting all of its international transactions in its home currency.

The purpose of this paper is to investigate the how a select group of U.S. small international businesses minimize their transaction exposure. A U.S. small international business is defined as a company with 500 or less employees and domiciled in the United States that buys or sells goods or services in one or more foreign countries.[6]

This paper is divided into six parts. In the next part the key transaction exposure miniminization strategies are discussed. In the third part a review of the relevant literature is presented. The fourth part contains the research questions and methodology of this study. The results of a survey of the strategies used by a select sample of U.S. small international businesses to minimize transaction exposure are presented in the fifth part. The final part of this paper contains the summary and conclusions of this research.

II. TRANSACTION EXPOSURE MINIMIZATION STRATEGIES

There are five basic transaction exposure minimization strategies available to a company, regardless of whether it is a multinational corporation with many subsidiaries located overseas or a company that is engaged only in export operations from its home country. These strategies are: the forward market hedge, the money market hedge, exposure netting, foreign currency options, and home currency billing.

The forward market hedge involves the purchase of a forward currency contract from an international bank. The forward currency contract or forward transaction "requires delivery at a future date of a specified amount of one currency for a specified amount of another currency."[7] Forward contracts can be arranged for one to twelve months into the future. There is an organized and economically efficient forward market for the currencies of the major industrial countries (e.g., the U.S. dollar, the Japanese yen, the U.K. pound sterling, the French franc, the German mark, etc.). Some international banks will make forward contracts for currencies for which no organized forward market exists, such as the Saudi Arabian riyal.

The money market hedge is a complex transaction involving borrowing foreign currency and then selling the proceeds of the foreign currency loan in the spot foreign exchange market for home currency. The foreign currency loan is usually paid back when the borrower generates that currency through normal business operations, such as receiving payment for the sale of goods and/or services.

Exposure netting involves offsetting liabilities in a foreign currency with receipts generated in that currency or another foreign currency. For example, a U.S.-based company that imports from and exports to Germany would pay for its German imports with the German marks generated by its export sales to Germany.

A foreign currency option is "a contract giving the buyer the right to buy or sell a given amount of foreign exchange at a fixed price for a specified period of time."[8] The option to purchase foreign currency is termed a call and an option to sell foreign currency is termed a put.

A foreign currency option is very different from a forward contract. The forward currency contract <u>requires</u> that each party deliver the currency necessary to fulfill the contract on a specified date. A foreign currency put or call option <u>may or may be used</u>. The option holder has the right to exercise the option within a stated period of time. Once the time limit of the option has been reached, the option expires and is no longer in force. Many banks offer foreign currency options. In addition, foreign currency options can be purchased and traded on the Philadelphia Stock Exchange and the Chicago Merchantile Exchange. Options are available for all major currencies and the exercise period can be up to one year.

Home currency billing requires payment for goods and/or services in the home currency of the company providing the goods and/or services. However, this strategy may not eliminate transaction exposure. Even if a company can require its customers to pay in home currency, its foreign suppliers may require it to pay for goods and/or services it purchases from them in their home currency.

III. LITERATURE REVIEW

Reasearch on methods used by companies to minimize transaction exposure is concerned primarily with large multinational corporations (MNCs).[9] A MNC is defined as " a large enterprise having a home base in one country and but operating wholly or partially-owned subsidiaries in other countries" [emphasis added].[10] No research could be found that was concerned exclusively with the techniques used by small businesses to reduce this key international financial risk.

Most research indicates that the use of forward foreign currency contracts is the most popular transaction exposure minimization strategy.[11] The forward contract is viewed as almost "risk-free" because it permits companies to "lock-in" an amount they will receive from a sale or an amount they will pay for an expense. However, there is a large body of research that indicates that the forward exchange rates used in these contracts are unbiased estimators of the future spot rate.[12] This suggests that a company could forego the expense of entering into a forward foreign exchange contract and purchase or sell foreign exchange in the spot market and, over the long run, have the same amount of foreign currency. "The expected value of a forward contract in terms of a spot transaction must be zero, otherwise there would be an arbitrage opportunity". [13]

IV. RESEARCH QUESTIONS AND METHODOLOGY

The following research questions are posed in this study:

1. What transaction exposure minimizations strategies are used by U.S. small businesses engaged in international operations?

2. Is there a statistically significant relationship between the ratio of international sales to total sales and the primary transaction exposure minimization strategy used by the the sample of U.S. small interantional businesses?

3. Do U.S. small international businesses with foreign subsidiaries use different transaction exposure minimization strategies than companies that do not have foreign subsidiaries?

The methodology used to answer these research questions was personal and telephone interviews with the president, owner, or chief financial officer of the U.S.-based small international business. Three criteria were used to select a company for inclusion in the sample: (1) the company had 500 or less employees; (2) the company was involved in some type of international busi-

ness operation (e.g., exporting goods and/or services, overseas manufacturing, etc.); and (3) the company had financial transactions in foreign currencies.

A sample of 50 small business that met the above criteria was used to answer the research questions. All of the small businesses used in the sample are located in the New York City metropolitan area. These companies are located in a major internationa financial center. Therefore, it is assumed that they have the means as well as the expertise required to implement any or all of the transaction exposure minimization strategies.

Research questions 2 and 3 were restated into testable hypotheses. Spearman's Rho Correlation Coefficient was used as the basis for answering the following hypothesis derived from research question 2:

HO (A): There is no statistically significant relationship between the ratio of a company's international sales to domestic sales and the primary transaction exposure minimization strategy used by the company.

The Chi-Square Statistic computed by crosstabulation of the survey data was used to test the following hypothesis derived from research question 3:

HO (B): There is no statistically significant difference between the transaction exposure minimization strategy used by companies that have foreign subsidiarie and those that do not have foreign-based operations.

All hypotheses were tested at the 5 percent level of significance (95 percent level of confidence). The Statistical Package for the Social Sciences (SPSS) computer program was used to perform all statistical computations. The findings of the survey are presented in the next section.

V. RESEARCH FINDINGS

A majority of survey respondents (41 out of 50 companies) are wholesalers that sell products overseas to other wholesalers or to retail outlets. Nine survey respondent companies are engaged in some type of manufacturing activity. Only 5 of the 50 companies contacted have foreign subsidiaries. The remainder of the sample conducted all of their international operations from offices in the New York City metropolitan area. The respondents' ratio of international sales to total sales ranged from a low of 0.06 to a high of 0.30, with a sample mean of 0.17.

All fifty companies in the sample used only the forward foreign currency hedge to minimize transaction exposure. The general reasons cited for not using any of the other strategies were: (1)

the fees charged to implement them are too large; (2) senior corporate decisionmakers did not know of the existence of other strategies or did not know how to implement them; and, (3) the risks associated with these strategies are too great for the return maximization or cost minimization they provide.

It is interesting to note that none of the companies in the sample used home currency billing to eliminate or reduce their transaction exposure. As one survey respondent noted:

> During the 1970s when the dollar was weak, all of our foreign customers wanted us to bill them in dollars. But when the dollar began to appreciate significantly in the early 1980s, they began to insist that we bill them in their home currency. Since February of 1985 the dollar has declined by about 20 percent, on a trade weighted basis, in the foreign exchange market. But our customers will not pay us in dollars. We still must assume all of the foreign exchange risk.

Because all of the companies in the sample used the same transaction exposure minimization strategy, the value of the Spearman's Rho Correlation Coefficient was indeterminant and its level of statistical significance could not be calculated. Therefore, hypothesis (A) could not be tested. As a result, an answer to research question 2 cannot be determined from this sample.

Hypothesis (B) could not be rejected at the 5 percent level of significance. This result is not surprising given that all of the companies in the sample used the same transaction exposure hedging strategy. Therefore, research question 3 is answered with a negative response: there is no statistically significant difference between the primary transaction exposure minimization strategy of companies that have foreign subsidiaries and those that do not have foreign subsidiaries.

The results reported above are probably affected by several limitations of this study. First, the size of the sample is very small. A larger sample may provide a better database for analysis. It is doubtful that all U.S. international small businesses use only forward foreign exchange contracts to miminize transaction exposure. A second limitation is that the companies included in the sample are located only in the New York City metropolitan area. A national sample may provide a database more representative of the U.S. small international business sector. For example, companies located near the stock exchanges that trade foreign exchange options may use this strategy instead of forward foreign exchange contracts. Finally, most of the companies in the sample were engaged only in wholesale trade. Although the industry break-down of the U.S. small international business sector is unknown, a sample that includes a relatively broader representation of industries may provide results quite

different from those detailed above.

VI. SUMMARY AND CONCLUSIONS

The purpose of this paper was to investigate the strategies used by a select sample of U.S. small international businesses to minimize their the transaction exposure. A sample of 50 small international businesses, located in the New York City metropolitan area, were surveyed regarding the techniques they employ to minimize transaction exposure. All of the companies surveyed relied exclusively on forward foreign exchange contracts to limit this key international financial risk. It could not be determined whether there was a statistically significant relationship between the ratio of the sample companies international sales to domestic sales. There was no statistically significant difference between the transaction exposure minimization strategy used by companies that have foreign subsidiaries and those that do not have foreign-based operations.

More research is needed regarding the role of U.S. small businesses in the international economy. In addition, very little is know about how small businesses engaged in international operations cope with the financial risks they face in their day-to-day operations. More research into this area may highlight problems that are preventing U.S. small businesses from entering the international business arena. Greater participation by U.S. small businesses in international trade, especially exports, may be a critical factor in solving our current balance of trade problems.

REFERENCES

[1] The U.S. Small Business Administration is beginning to study this important area. A recent Request for Proposals issued by the SBA included a topic concerning the export role of the U.S. small business sector.

[2] Alan C. Shapiro. Multinational Financial Management. (2nd Edition. Boston: Allyn and Bacon. 1986). p. 166.

[3] Ibid.

[4] David K. Eiteman and Arthur I. Stonehill. Multinational Business Finance. (Fourth Edition. Reading, Ma.: Addison-Wesley Publishing Company. 1986). p. 154.

[5] Ibid.

[6] This is an extension of the traditional definition of a "small business"

[7] Eiteman and Stonehill, p. 94.

[8] Ibid., p. 112.

[9] See for example, S. I. Srinivasulu. "Classifying Foreign Exchange Exposure", Financial Executive. February 1983. pp. 36-44.

[10] David K. Pearce (General Editor). The Dictionary of Modern Economics. (/cambridge, Ma.: MIT Press. 1984). p. 299.

[11] Thomas G. Evans and William R. Folks. "Using Forward Contracts for Exposure Management". Business International Money Report. March 12, 1983. pp. 91-93.

[12] See Shapiro, p. 240 and Eiteman and Stonehill, pp. 150-153 for excellent bibliographies of research in this area.

[13] Shapiro, p. 166.

APPENDIXES

AGENDA

Third Annual Symposium
on
Creativity, Innovation and Entrepreneurship

Sheraton Tara

Framingham, MA.
Thursday, May 29, 1986

8:15-9:00 a.m.	Registration	TARA BALLROOM NORTH
9:00-9:15 a.m.	Welcome	TARA BALLROOM NORTH
9:15-10:00 a.m.	Keynote Addresses	TARA BALLROOM NORTH

Speakers:
Arthur Lipper
Chairman, Venture Magazine
&
Sidney Parnes
Chairman, Creative Education Foundation, Inc.

10:00-10:15 a.m.	Coffee Break	TARA BALLROOM NORTH

10:15-11:30 a.m. Workshop Series I:

A) Camelot South

Creativity, The Projective Mind
Tips and techniques to develop creativity in your business based on real life examples .

John Nezzaro
Ayn Decker

B) Camelot Centre

Shepherding Innovation and Entrepreneurship Throughout the Business.

Prescriptions for encouraging innovation & entrepreneurship in small and large businesses.

Mary Mossop & John Mossop

C) King James

The Entrepreneurs: Who are They?

Review and discussion of recent studies and examinations into typing potential entrepreneurs based on their attitudes, perceptions and values.

Lloyd Fernald & George Solomon
William Dunkleburg

D) King Richard

Small Business Incubators: A Creative Tool for Local Development

A review of various examples of this innovative tool for generating jobs and fostering small business development.

Loren Schultz

11:30-1:00 p.m. Luncheon TARA NORTH

Speaker:
Stew Leonard
President, Founder Stew Leonard's

1:00-2:15 p.m. Workshop Series II

A) Camelot South

Business Intelligence & Expert Systems

What entrepreneurs can learn from corporate America on how to track competitive developments. Also, how expert systems can aid in formulating compensation decisions.

Benny Gilad
Ernest Forman

B) King James

How to Stimulate High Technology Innovations

Examining and discussing how to stimulate high tech innovations into marketable products. Also, what environmental conditions are essential to fostering creativity.

Mark Weaver
David Frame

C) King Richard

Management Tools for the Growing Business

A discussion of the various management tools available for entrepreneurs as well as pitfalls and strategies for entrepreneurial businesses.

Paul Hassie
Joseph Genofese

D) Camelot Centre

Innovative Ways of Motivating Employees To Be Creative and Entrepreneurial

Techniques for motivating individuals to act more creative and entrepreneurial by generating creative business environments.

Miles Kierson
Erik Winslow

2:15 - 2:30 p.m. Coffee Break TARA NORTH

2:30 - 3:45 p.m. Workshop Series III

A) King James

Using the Personal Computer to Aid the Innovative and Creative Entrepreneur

AT&T Information Systems will demonstrate how PC's can aid entrepreneurs and managers to effectively deal with the changing market place.

Chris Kenney

B) Camelot South

Entrepreneurial Effect on the Economy

An examination of the effect of entrepreneurs and entrepreneurship on the economic growth in the United States.

Tom Gray
William Dennis

C) King Richard

Ownership of Ideas & Information

A discussion of who will own the ideas and information provided by Creativity, Innovation and Entrepreneurship.

Peter Marx

D) Camelot Centre

Venture Capital: Criteria for Spotting High Potential Ventures

An examination of the hows and whys venture capital is the fuel for new ventures and internal corporate projects.

Jeffry Timmons

4:00 - 5:30 p.m. Reception PRINCE CHARLES SOUTH

Friday, May 30, 1986

9:00-9:45 a.m. Keynote Address TARA NORTH

Chris Kenney
Vice President, General Business Systems
AT&T Information Systems

9:45-10:00 a.m. Coffee Break TARA NORTH

10:00-11:15 a.m. Workshop Series IV

A) King James

Setting the Climate for Innovation and Entrepreneurship

Programs and activities focusing on how to create and stimulate innovation and entrepreneurship in the public and private sectors.

Sidney Shore
Bruce Whiting

B) King Richard

Entrepreneurship: The Corporate and New Venture Environment

Review and discussion of recent studies and examinations into typing potential entrepreneurs based on their attitudes, perceptions and values.

Fran LeBrecque
Mark Peckham
Donald Job

C) King Henry

Entrepreneurial Education

Various programs and efforts to stimulate entrepreneurship by fostering a positive learning climate.

Cathy Ashmore
Leslie Hitch

D) Camelot South

Franchising

A creative way to expand your business ideas and products. The pitfalls and practices of both to the franchisor and franchisee.

Lee Sutherland
Norman Slater

11:15-12:30 p.m. Workshop Series V

A) King Henry

State and Local Initiatives in Economic Development

Representatives from local and state organizations discuss the hows and whys of economic development initiatives.

Frances Alexander
James Molloy

B) King James

Resources for New Product Development: Making Financial Projections For A Business Plan.

A discussion of the preparation of cash flow, earnings and balance sheet projections for financial analysis using computer applications.

Diana Ororbia
Richard Ruskan

C) Camelot South

Financial Management Planning for the Entrepreneur

Financial management planning is more than an exercise of pushing a pencil. It is the road map which enables creative and innovative entrepreneurs to fulfill their hopes and dreams.

Bernie Meyler
Bruce Phillips
Carl Crego

D) King Richard

How to Write a Winning Business Plan

The business plan is (a) ticket of admission to financing, (b) the flight plan of the enterprise. It represents the entrepreneurial & management team, whose quality and chances for success will be judged by both the form and content of the plan.

Stan Rich

12:30 - 1:30 p.m. Luncheon TARA NORTH

Speaker

Dr. David C. McClelland
Boston University
&
McBer and Company

Invited Speakers and Workshop Presenters

Frances Alexander
State Representative
Massachusetts

Dr. Cathy Ashmore
National Center for
Research in Vocational Education

Dr. Carl Crego
Pace University

Ayn Decker
Management Consultant

William Dennis
Senior Research Fellow
National Federation of
Independent Business

Dr. William Dunkelberg
Purdue University

Dr. Lloyd W. Fernald, Jr.
University of Central Florida

Dr. Ernest Forman
George Washington University

Dr. Davidson Frame
George Washington University

Dr. Benny Gilad
Rutgers University

Joseph Genofese
Arthur Young

Thomas Gray
Chief Economist
U. S. Small Business Administration

Paul M. Hassie
Arthur Young

Leslie Hitch
Babson College

Dr. Donald Job
Northeastern University

Chris Kenney
Branch Manager
AT&T Information Systems
Northern New England Region

Miles Kierson
Management Consultant

Fran LeBrecque
Founder & Former Owner,ADAP Auto Parts

Arthur Lipper, III
Chairman, Venture Magazine

Stew Leonard
Founder, Owner & President,
Stew Leonard's

Dr. David McClelland
Boston University

Dr. James Molloy, Jr.
Northeastern University

Peter Marx
Goulston & Storrs

Bernard Meyler, C.P.A.
Suffolk University

Mary Mossop
Washington, D.C.

Jack Mossop
Washington, D.C.

John Nezzaro
President, Provandie & Chirug, Inc.

Dr. Sidney Parnes
Chairman, Creative Education Foundation, Inc.

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U.S. Small Business Administration

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Wellesley Hills, MA

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Dr. George T. Solomon
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University of Alabama

Dr. Erik Winslow
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